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REPORT

ON THE

Health of the County Borough
of Belfast,
for the Year 1930.

BY

The Medical Superintendent Officer
of Health
And Colleagues.

BELFAST.

JOHN ADAMS, PRINTER, KING STREET.
1931.



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County Borough of Belfast.

PUBLIC HEALTH COMMITTEE,
1930.

Chairman :

Alderman J. DUNLOP WILLIAMSON, M.D., J.P.

Vice-Chairman :

Councillor WALTER FRANCIS CLOKEY.

Aldermen :

JAMES ARCHIBALD DORAN, J.P.

HENRY MIDGLEY.

ROBERT PIERCE.

JAMES DUNLOP WILLIAMSON, M.D., J.P.

Councillors :

HUGH ARMSTRONG.

JOSEPH MAGUIRE.

CHARLES EDWARD BOURKE, J.P.

SIR CRAWFORD McCULLAGH, J.P.

WALTER FRANCIS CLOKEY, J.P.

SAMUEL McLOUGHLIN.

THOMAS HENDERSON, M.P.

CLARKE SCOTT.

FRANCIS JAMES HOLLAND.

WILLIAM JAMES WILLIAMSON.

JAMES KILPATRICK.

STAFF.

(1st January).

- 1 Chief Clerk.
- 1 Clerk, Notification of Deaths, etc.
- 2 Clerks, Infectious Disease.
- 4 Clerks of Divisions.
- 1 General Clerk.
- 2 Clerks under Maternity and Child Welfare Scheme (1 temporary).
- 2 Shorthand Writers and Typists.
- 4 Divisional Inspectors.
- 4 Inspectors under the Sale of Food and Drugs Acts.
- 3 Inspectors under the Factory and Workshop Act (1 male and 2 females).
- 1 Inspector of Dairies and Cowsheds.
- 1 Inspector of Milkshops.
- 1 Inspector of Lodging Houses.
- 1 Port Sanitary Inspector.
- 1 Inspector in Charge of Infectious Disease Staff.
- 4 Assistant Disinfectors.
- 14 District Inspectors.
- 3 Drain Testers' Assistants.
- 11 Health Visitors.
- 1 Superintendent of Midwives.
- 1 Notice Server.
- 1 Time and Complaints Clerk.
- 5 Employed at Disinfecting Station (4 males and 1 female).
- 1 Disinfectant Storeman.

COUNTY BOROUGH OF BELFAST—1930.

(53 WEEKS).

Summary of Vital Statistics.

Area (Census 1926) (Exclusive of 1,723 acres of tidal water)	..	..	..	14,797 acres.
Population (Census 1926)	..	..	..	415,151
Number of Houses in the City	..	..	..	89,774
Number of Inhabited Houses (Census 1926)	..	..	..	82,638
Number of Uninhabited Houses (Census 1926)	..	..	..	1,714
Number of Families or Separate Occupiers (Census 1926)	..	..	..	89,724
Average Number of Persons per Family (Census 1926)	..	..	..	4.58
Density	..	..	..	28.1 persons to an acre.
Length of Public Streets	..	..	..	Streets classified as I. II. or III. under Ministry of Home Affairs Road Classification Scheme—272 miles, 1,041 yards.
				Back streets and passages repairable by the Corporation and used for vehicular traffic—65 miles 929 yds.
Rateable Value at 1st April, 1930	..	..	..	£1,860,330
Id. Rate was estimated to produce	..	..	..	£7,060
Cost of Public Health Services	..	..	..	£64,403 13s. 10d.
Marriages	..	..	..	3,175
Marriage Rate	..	..	..	7.65 per 1,000
Live Births (registered)	..	..	..	9,558 (Reg. General)
Still Births (not registerable but notifiable)	..	..	..	449
Live Births (notified)	..	..	..	9,596
Birth Rate	..	..	..	22.7
Birth Rate average for the ten years, 1921-1930	..	..	..	23.8
Deaths	..	..	..	5,451
Death Rate	..	..	..	12.9
Death Rate average for the last ten years, 1921-1930	..	..	..	14.3
Deaths of Infants under one year of age	..	..	..	749 (Reg. General)
Infant Mortality Rate	..	..	..	78 deaths per 1,000 births
Average for the last ten years, 1921-1930	..	..	..	103 deaths per 1,000 births.
Number of Women dying in, or in consequence of childbirth—				
From Sepsis	..	..	8}	(Notifications of Deaths—Not
Other Causes	..	..	35}	Registrar-General's figures).
Deaths from Zymotic Diseases	..	..	..	218
Zymotic Death Rate	..	..	..	0.5
Deaths from Measles	..	..	..	6
Deaths from Whooping Cough	..	..	..	65
Deaths from Diarrhoea and Enteritis under 2 years of age	..	..	..	116
Deaths from Phthisis	..	..	..	436
Death Rate do.	..	..	..	1.0
Total Deaths from Chest Affections	..	..	..	1,275
Death Rate do. do.	..	..	..	3.0

PUBLIC HEALTH DEPARTMENT,
CITY HALL, BELFAST.

MAY, 1931.

To the Right Honourable the Lord Mayor, Aldermen, and Councillors.

My Lord, Mrs. Coleman, and Gentlemen,

I have the honour to present to you my second Annual Report, dealing with the state of the Public Health in Belfast for the year 1930.

It is customary to prepare a survey report every fifth year, one dealing fully with every phase of the Public Health ; my first report, that for the year 1929, was a survey report.

In the intervening years, however, an ordinary report is deemed sufficient.

While the necessary statistical returns are, of course, given in an ordinary report the general information accompanying the same is relatively much less than that given in the survey report.

In examining the state of the Public Health for 1930, it will be as well to take the separate branches seriatim and examine the progress made and the needs of each.

Maternity and Child Welfare.

Within the last thirty years much attention has been paid to the infant mortality rate. It was realised that if infants died, then, apart from this loss in itself, diseases which caused their deaths left their mark in the form of weakness and disability upon those infants which survived attack from the same diseases. Such diseases threatened the well being of the community. Disease costs money. Delicate children evoke our sympathy. But the aim and object is to remove those causative factors which, apart from the human misery they cause through death, are costly to the community as well. To this end the State introduced an Act in 1907, called the Notification of Births Act ; this was an adoptive Act. But in 1915 the Notification of Births Extension Act was passed ; this Act made it incumbent upon all local authorities to take steps. The Act required the notification of every birth within 36 hours after the event, to the Local Authority. The implication was that the Local Authority would do something with this information. Voluntary workers—always the noble pioneers in any movement for the well being of humanity—joined forces with the newly created Health Visitors. Committees were set up and Infant Welfare Centres sprang into being.

It soon became obvious that the outstanding need was education in mothercraft. Further, the value of such teaching, to a very large extent, depended entirely upon the professional equipment, alike, of the clinic doctor and of the Health Visitor. The times have demanded that as and when vacancies arise, highly qualified officers should be appointed to such posts. Unfortunately the work disclosed that there was a large amount of disability arising out of malnutrition. Much of this latter was due to sheer economic distress, but some was due to ignorance of the nutritional value of foodstuffs—money was being laid out wrongly. Thereafter milk, wet or dry, was provided free of cost or at some charge in keeping with the means of the family concerned. Meals too at a cheap rate were given to expectant and nursing mothers ; inasmuch as impoverished mothers cannot be expected to produce thriving babies. From day to day Health Visitors have visited the “births notified,” teaching breast-feeding and the hundred and one things which are so necessary if the infant is to get a good start in life.

During all these years a great change has come over the midwives' service of the country. Subsequent Midwives Acts have all but replaced the older well-meaning, but untrained women ; and the overwhelming majority of midwives

to-day are alert, well qualified, and responsible women, who follow their book of rules carefully, and earn the respect to which they are justly entitled. To-day fully 40 per cent. of the confinements in Belfast are conducted alone, from first to last, by these midwives. In 1930 but few midwives dallied in notifying births, in contrast to the delays which took place in the previous year, involving a request for an explanation. High praise must be given to the midwives for their share in bringing about one most gratifying record. So far from any infant becoming blind from Ophthalmia Neonatorum (or from simple inflammation) in 1930, not a single infant was left with a scarred eye, that is with impaired vision. In the previous year this was not the case. Ophthalmia Neonatorum means any purulent discharge coming from a baby's eye within 21 days after birth. It is always a serious condition, and where the disease results from an infection with a certain germ the infant's vision may be lost within a matter of hours. Certified midwives and Health Visitors alike have explicit instructions to telephone any case of eye inflammation, however slight, to me, unless the case is already under the care of a medical man. Of course, if a medical man engaged to attend a confinement has to put up with the assistance of some ignorant handy woman, then risks will have to be run. There is no legal remedy at present in this connection. In all cities and towns there are blind people, and a number of these owe their condition to readily preventible disease occurring in the early days of life. Ante Natal work should prevent the possibility of such cases. Alert midwives and Health Visitors, in the absence of a medical man, should seize upon the faintest indication of such disease and nip it in the bud by drawing attention to the case. The number of cases of Ophthalmia Neonatorum notified during 1930, was 113. The number of cases of inflamed eyes notified by midwives and Health Visitors was 93.

The Puerperal Pyrexia Regulations came into force in 1930. For many years Puerperal Fever has been a notifiable disease. Puerperal Pyrexia means a febrile or feverish condition (occurring within the first twenty-one days after childbirth), in which a temperature of 100.4°F. or more has been sustained during a period of 24 hours or has recurred during that period. It may be due to some simple cause, but in a small number of cases it is the precursor of the more dreaded Puerperal Fever. During 1930, 75 cases of Puerperal Pyrexia were notified; of these 4 died, and 71 recovered. In each case the midwife is suspended from attending any other case until the patient is removed to hospital or until she recovers. The midwife's clothing is disinfected and she takes a disinfectant bath; this is not because she has caused the disease, but lest she should convey some infection to her next cases. There is a question here which should be faced, and that is that where the midwife has lost financially through suspension—even if only for a day—provision for compensation should be made. During 1930, 47 Forms of Enquiry were filled in in each case of death from or arising out of childbirth. These enquiries were conducted at the request of the Ministry of Home Affairs, with a view to gaining information as to the factors associated with or leading to such deaths, the ultimate aim—prevention—being the goal.

The Nursing Home and Midwives Act 1929 came into force in January 1930. This Act was intended to safeguard the public who might have cause to use a Nursing Home for surgical, medical, or maternity purposes, by insisting upon a certain standard of requirements. Thus everyone desirous of carrying on such a Home had to satisfy the City Corporation on such points as: site, accommodation, equipment, qualifications, cubic capacity of rooms, sanitary fittings, and so forth. During 1930, 53 applications were received, of which 44 were granted, while 9 were refused.

In the body of this report there will be found full statistics of the work carried out at the Infant Welfare Centres, and in the people's homes. It is fine work, so ably backed up and made possible by a far-seeing Committee and Council. But one or two points remain to be written. In 1930 your Council decided to increase the number of weekly Child Welfare sessions from six to nineteen; six of the latter would be for Ante Natal work, and thirteen for infant consultations. Instead of eleven Health Visitors we are to have twenty. This will enable us to deal with "toddlers." We still need specially built centres worthy of this great work, and I feel confident such will be forthcoming as the times permit.

In 1930 we saw the infant mortality rate fall to 79 ; only once before in the city's history has the rate been under 100—an excellent result.

The lives of infants are to a large extent dependent on the purity of the public milk supply. If we take a walk up to Graymount Hospital, we shall see little children lying in bed with various forms of surgical tuberculosis. From post-mortems it appears that in some 25 per cent. of all human tuberculosis cases under five years of age, and over 40 per cent. of abdominal, gland and joint tuberculosis cases during this age period, the bovine species of germ (the tubercle bacillus) is present. Tubercle infested milk has much to answer for. Why is this allowed to exist? It is because the amount of tuberculosis in cattle is so great that it would seem we cannot afford to slaughter them all. It is said that at least 25 per cent. of all dairy cows kept in cow-sheds suffer from tuberculosis. The latest Royal Commission on Tuberculosis states that the milk of cows obviously suffering from tuberculosis frequently contains tubercle bacilli; the liability of the milk to contain tubercle bacilli is greatest when one or more quarters of the udder have become tuberculous.

What is to be done to stamp out the disease to prevent human infection? Behring's vaccination has been the means of making bovines immune to the disease, but this immunity has lasted for two years only.

Our only hope at present—when some eight per cent. of milk samples are found to contain tubercle bacilli—is to use milk from cows which have passed the Tuberculin test or to drink Pasteurised milk. I believe in both, slightly more especially in Pasteurised milk. R. G. White of the Lister Institute says that pasteurising milk ensures a non-infective milk so far as the tubercle bacillus is concerned. My reason for a slight preference for Pasteurised milk over Grade A. T.T. milk is that the heating process in the former destroys any scarlet fever or diphtheria toxins. Your authority should give a lead to the citizens and should only allow Grade A. T.T. and Pasteurised milk to be supplied to infants and expectant women, etc., who are entitled to receive milk under our scheme.

Tuberculosis—School Medical Inspection.

The subject of Tuberculosis is dealt with fully in the body of this Report by the Chief Tuberculosis Officer, also by the Medical Superintendent of Whiteabbey Sanatorium and by the Surgeon to Graymount Hospital for surgical cases of tuberculosis. School Medical Inspection is dealt with in a separate annual report. These two subjects form a very important part of Public Health work, and their interaction and relationship to each other and their correlation with the Public Health as a whole must be studied. The first point that strikes one is that in Belfast only those cases of tuberculosis are notifiable in which there is a positive sputum, that is where the germs of tuberculosis are present in the expectoration. If a family doctor comes across a case of "consumption" in which the tubercle germs are not present in the expectoration, then I know that that patient will meet with the most conscientious skill and care. As, however, the disease is not notifiable to the Local Authority at this "sputum negative" stage, a question may justifiably be raised as to whether the sanitary surroundings are studied, reported upon, and if necessary corrected, and also as to whether the family contacts are examined, and as to whether admission to Whiteabbey Sanatorium is possible. The system under the Municipality is a highly organised one. It would be wrong to suggest that it deals only with notified cases, that is with cases in which the germs are present in the sputum. Many patients are referred to the Tuberculosis Institute for an opinion and so, in a way, non-notifiable cases are discerned and steps are taken. The great point I wish to emphasise is that if early cases of tuberculosis—sputum negative cases—were made notifiable, these would automatically come under a Municipal system of Sanatorium consideration, of "contact" evaluation and of "Housing" scrutiny. Early cases of "consumption" require to be taught a "way of life," a regime. The line of demarcation between a non-notifiable and a notifiable case must often be a close one. Why not make the disease notifiable in all its stages? Why not cement that close and cordial union between brother private medical practitioner and official Municipal Chief Tuberculosis Officer even stronger than the bond is

welded now. Would not this be a great step on behalf of those in our midst suffering from early tuberculosis? Think otherwise of the delay in Sanatorium treatment; think of the advance in the ravages of the disease and of the long difficult pull to restore such—alas! too late in many cases. Look at another phase of this question. Without the fuller notification I plead for, we cannot assess the extent to which tuberculosis exists in our midst. True we can form some idea as to the incidence of tuberculosis in Belfast by comparing the death rate from this disease with that in other cities. The following Table gives an idea of our position, though it has to be remembered that cities differ as to the nature of their industries, housing etc., and therefore as to the possibilities of contracting tuberculosis.

TABLE

Showing the death rates from Pulmonary and Non-Pulmonary Tuberculosis per 1,000 of the population.

Country or Town.	1927		1928		1929		1930	
	Pul- monary	Non- Pul- monary	Pul- monary	Non- Pul- monary	Pul- monary	Non- Pul- monary	Pul- monary	Non- Pul- monary
England and Wales	.79	.18	.75	.17	.79	.16	.73	.15
Scotland ..	.71	.23	.68	.29	.67	.26	.62	.26
Birmingham ..	.89	.17	.86	.13	.94	.15	.90	.13
Leeds ..	.96	.21	.95	.19	1.06	.24	.90	.21
Liverpool ..	1.14	.24	1.18	.21	1.21	.25	1.19	.20
Manchester ..	1.15	.23	1.10	.19	1.21	.20	1.15	.25
Sheffield ..	.70	.18	.74	.19	.78	.16	.68	.17
Belfast ..	1.24	.30	1.20	.27	1.16	.23	1.02	.36

The coming into being of the Medical Panel in 1930 will lead to a greater call on the services of the medical officers at the Tuberculosis Institutes. Panel patients will not, or should not, be slow in consulting their doctors, consequently this will lead in all probability to an increased recognition of the existence of more cases than we suspect at present. It will be seen, therefore, that until all forms and stages of tuberculosis are notifiable, are made known, we cannot tackle the disease as fully as is desirable. Earnest though the efforts are to deal with the disease once its existence is disclosed, we are not doing enough to prevent its occurrence. We have no Municipal Nursery Schools with which to build up the toddlers, the children of pre-school life. Notwithstanding the good work done by the Education Committee in the feeding of school children, we still find that five per cent. of those medically inspected are suffering from malnutrition. The teachers are courteously asked to continue watching for such cases.

We still have many overcrowded and ill ventilated schools, mostly voluntary schools; school accommodation is inadequate in certain areas, particularly the Falls, Shankill Road, Crumlin and Sandy Row areas. The "early" admissions are excessive for the accommodation available. Each year it is found that catarrhal conditions are common amongst the school children. Bronchial catarrh sometimes leads on to tuberculosis. We have a great need for schools for children who are threatened with tuberculosis—sometimes called pre-tuberculous children. Two schools, each to hold two hundred and fifty of such children, are urgently required, one in the East and one in the South. These two schools are by way of a commencement only. In this city, with a school population of sixty thousand children, the only school under open-air conditions for pre-tubercular children is that at Graymount where one hundred and ten children are catered for. Rest, nourishment

and education according to their physical ability, what a change for the better has been wrought in these children. If only these could be visited at Graymount, nothing that I write here would be required to convince as to the necessity of proceeding as soon as possible with the provision of the two open-air schools. As for school children found suffering from Pulmonary Tuberculosis, there is little provision for such. At Whiteabbey Sanatorium there is accommodation for sixty-five ; it is not nearly sufficient. We need a school to hold certainly not less than 100. Meanwhile, school children suffering from pulmonary tuberculosis attend the ordinary elementary schools and mix with healthy children ; this is not satisfactory.

During 1930, 116 school children were referred by the School Medical Officers to the Tuberculosis Institutes for an opinion. Of this number 7.8 per cent. were found to have Pulmonary Tuberculosis ; 6 per cent. had Hilar tubercle ; 6 per cent. were suspicious cases and 68 were not suffering from the disease.

I repeat that in Belfast we need two Open-air schools for delicate children to accommodate a total of 500 and we require a school with accommodation for 100 children suffering from Pulmonary Tuberculosis.

If to these we add the needed extensions to Graymount Hospital and Whiteabbey Sanatorium (that is until such time as we can afford a new Sanatorium), then our house will be in order as regards the battle against Tuberculosis.

Housing.

Consideration of the visits paid from house to house and of the work accomplished is set forth within this report ; it serves to show that a considerable amount of housing supervision has been exercised. Unquestionably there is great need of the erection in the city of large a number of houses for the working classes, at an economic rental. A recent return shows that some 2,000 houses were found to be empty. These are not houses for the working classes in an economic sense. I trust that early steps will be taken to meet this need. Respecting houses or areas which have lapsed below the standard of modern requirements the following points may be noted :—

The South Division.

While there are no districts which would come under the heading of “ Slums ” in the South Division, there are several where the houses are gradually approaching that state which will ultimately bring them within the designation of “ Slum Areas.”

These consist mostly of the kitchen class. Owing to age, to the weather-beaten state of the brickwork, to decayed and corroded slating nails, to rotted rafters, to perished damp proof courses and to plastering decayed and crumbling, they have passed that stage where “ darning ” only is necessary, and where more extensive repairs are required ; in fact, the cost of reconditioning some of this property is probably prohibitive—it certainly is prohibitive from an owner’s economic point of view. They are reluctant, therefore, to carry out extensive repairs from which they will not receive a proportionate return, and simply carry on the process of “ darning ” which, to a certain extent, is lost labour.

These houses require to be dealt with under the Housing Acts.

The occupants are, generally speaking, not in a position to pay the rent of the modern house, so that it is absolutely necessary to provide kitchen houses at low rents.

The number of streets, roads, etc., involved in the South Division is approximately sixty-eight, whilst the number of houses involved is 1,510. The areas involved are Cullintree Road, Linfield Road, Falls Road, Cromac Street and Donegall Road.

The North Division.

In the North Division there are six insanitary areas involving twenty-three streets and containing 491 houses ; these areas are in the region of Academy Street, Lancaster Street, Little Patrick Street, Hardinge Street and Upper Library Street. In addition there are some 88 houses in the other streets which could be closed on sanitary grounds as unfit for use or occupation as dwelling houses.

The East Division.

In the East Division there are twenty-eight streets comprising 835 houses which are insanitary.

The West Division.

In the West Division, three hundred and forty-two houses in twenty-seven streets, courts etc., have served their day and generation. They are very old houses with a kitchen and two bedrooms ; some of the streets are very narrow. These houses cannot be put into proper order. The fact is that a Housing campaign is required in Belfast. No fewer than one hundred and forty-six streets involving three thousand, one hundred and seventy-six houses are known to the department as requiring drastic treatment. Where are the tenants of these insanitary houses to go ? We require many new houses, to be let at a rent within the means of the working classes.

Infectious Disease.

The importance of this subject is such that a special article has been written and this will be found in the body of the report.

The Municipal Abattoir.

There are no private slaughter houses in Belfast. Over five thousand animals are slaughtered every fortnight at the Municipal Abattoir. A special article will be found embodied in the report.

The Staff.

It is with the greatest pleasure that I acknowledge the work of the whole staff. The work of a department having so many ramifications and sub-divisions cannot be carried out satisfactorily unless there is a genuine desire on the part of all to work hard and harmoniously. I have received nothing but kindness and loyal support from all ranks and I gladly thank everybody for their splendid contribution to the year's work.

To you, my Lord Mayor, Aldermen and Councillors, I express my gratitude for the kind support you have invariably given to me.

I have the honour to remain,

Your obedient Servant,

CHARLES S. THOMSON,
Medical Superintendent Officer of Health.

BIRTHS.

9,558 births were registered during the year, equivalent to a birth rate of 22.7 per 1,000 of the population. This is an increase of 1.3 per 1,000, compared with the preceding year, when the number registered was 8,899 and the rate 21.4.

The average number registered annually during the ten years, 1920-1929, was 10.355, and the average annual birth rate 24.5.

The following shews the number of births, the percentage of the total number registered during the year, and the annual birth rate per 1,000 of the population in each of the four quarters of the year :—

		No. of Births	Percentage of Total No.	Birth Rate
First Quarter	..	2,446	25.6	23.6
Second Quarter	..	2,526	26.4	24.4
Third Quarter	..	2,292	24.0	22.1
Fourth Quarter	..	2,294	24.0	20.6

DEATHS.

5,451 deaths were registered from all causes during the year, equivalent to a death rate of 12.9 per 1,000 of the population, a decrease of 2.7 per 1,000 compared with the preceding year, when the number registered was 6,462 and the rate 15.6.

The average number registered annually during the ten years 1920-1929 was 6,228 and the average annual death rate 14.7.

The following shews the number of deaths, the percentage of the total number registered during the year, and the annual death rate per 1,000 of the population in each of the four quarters of the year :—

		No. of Deaths	Percentage of Total No.	Death Rate
First Quarter	..	1,656	30.4	16.0
Second Quarter	..	1,297	23.8	12.5
Third Quarter	..	1,032	19.0	10.0
Fourth Quarter	..	1,466	26.9	13.2

TABLE I.

Shewing the number of deaths, the percentage of the total number registered, and the death rate per 1,000 of the population at various age periods compared with the year 1929.

		1930			1929		
	No. of Deaths	Percentage of total Deaths Registered	Death Rate per 1,000 of the population	No. of Deaths	Percentage of total Deaths Registered	Death Rate per 1,000 of the population	
Under 1 year	.. 749	13.7	1.8	1,000	15.5	2.4	
1 year and under 5 years	.. 301	5.5	0.7	597	9.2	1.4	
5 and under 25 years	.. 469	8.6	1.1	499	7.7	1.2	
25 and under 45 years	.. 635	11.6	1.5	800	12.4	1.9	
45 and under 65 years	.. 1,539	28.2	3.7	1,620	25.1	3.9	
65 years and upwards	.. 1,758	32.3	4.2	1,946	30.1	4.7	

TABLE II.

Shewing the number of deaths from various causes, together with the percentage of the total number registered and the death rate per 1,000 of the population.

		1930			1929		
Cause of Death.	No. of Deaths	Percentage of total Deaths Registered	Death Rate per 1,000 of the population	No. of Deaths	Percentage of total Deaths Registered	Death Rate per 1,000 of the population	
Typhoid Fever	.. 2	0.04	0.005	4	0.06	0.01	
Typhus Fever	.. —	—	—	—	—	—	
Smallpox	.. —	—	—	—	—	—	
Measles	.. 6	0.11	0.01	77	1.19	0.19	
Scarlet Fever	.. 7	0.13	0.02	8	0.12	0.02	
Whooping Cough	.. 65	1.19	0.16	138	2.14	0.33	
Diphtheria	.. 22	0.4	0.05	19	0.29	0.05	
Dysentery	.. —	—	—	—	—	—	
Influenza	.. 35	0.64	0.08	363	5.62	0.87	
Diarrhoea—							
Under 2 years of age	.. 116	2.13	0.28	149	2.31	0.36	
Tuberculous Diseases—							
Phthisis	.. 436	8.0	1.05	485	7.51	1.17	
Other Forms	.. 149	2.73	0.36	97	1.50	0.23	
Total Tuberculous Diseases	585	10.73	1.41	582	9.01	1.40	
Diseases of the Respiratory System—							
Pneumonia	.. 357	6.55	0.86	680	10.52	1.64	
Other	.. 482	8.84	1.16	761	11.78	1.83	
Total Dis. Resp. System	.. 839	15.39	2.02	1,441	22.30	3.47	
Total Chest Affections	.. 1,275	23.39	3.07	1,926	29.8	4.6	
Cancer	.. 466	8.55	1.12	424	6.56	1.02	
Violence	.. 130	2.38	0.31	137	2.12	0.33	

TABLE III.

Shewing the annual death rate per 1,000 of the population from all causes during the twenty years 1911-1930 ; also the average rate for quinquennial periods.

Year.		Rate.		Year.		Rate.
1911	..	17.2	18.2	1921	..	14.4
1912	..	18.1		1922	..	14.8
1913	..	18.8		1923	..	13.8
1914	..	18.9		1924	..	14.3
1915	..	17.9		1925	..	14.0
1916	..	16.7	18.3	1926	..	15.4
1917	..	16.7		1927	..	13.6
1918	..	22.7		1928	..	14.0
1919	..	17.9		1929	..	15.6
1920	..	17.5		1930	..	12.9

TABLE IV.

Shewing the number of Births registered in each of the several Dispensary Districts, also the number of deaths of Infants under 1 year old.

DISTRICT			BIRTHS				DEATHS
			1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Under 1 Year
No.	1	..	120	111	94	116	35
„	2	..	273	283	249	250	89
„	3	..	286	334	270	285	85
„	4	..	226	225	219	207	67
„	5	..	137	130	110	114	43
„	6	..	148	147	132	145	39
„	7	..	16	13	12	22	3
„	8	..	45	42	55	50	9
„	9	..	205	208	206	158	62
„	10	..	197	200	170	195	44
„	11	..	190	228	181	161	57
„	12	..	166	171	183	180	82
„	13	..	109	124	128	121	32
„	14	..	3	—	1	4	—
„	15	..	178	162	158	156	62
„	16	..	147	148	124	130	40
Total			2,446	2,526	2,292	2,294	749

TABLE V.

Shewing the Population, the number of Births, the Birth Rate per 1,000, the number of Deaths, the Death Rate per 1,000, and the natural increase during the fifty years 1881-1930.

Year	Population	No. of Births	Birth Rate per 1,000	No. of Deaths	Death Rate per 1,000	Natural Increase
1881	207,671	6,942	33.4	4,911	23.6	2,031
1882	207,671	6,820	32.8	5,365	25.8	1,455
1883	214,022	6,694	31.3	5,600	26.2	1,094
1884	216,622	7,231	33.4	5,073	23.4	2,158
1885	219,222	7,161	32.7	6,127	27.9	1,034
1886	221,822	7,344	33.1	5,256	23.7	2,088
1887	224,422	7,502	33.5	5,807	25.9	1,695
1888	227,022	7,719	34.0	5,742	25.3	1,977
1889	229,622	7,705	33.6	5,921	25.8	1,784
1890	232,222	8,250	35.5	6,861	29.5	1,389
1891	255,922	8,650	33.8	6,537	25.5	2,113
1892	261,046	8,592	32.9	6,910	26.5	2,166
1893	275,000	9,399	34.2	6,848	24.9	2,551
1894	285,000	9,349	32.8	6,615	23.2	2,734
1895	295,000	9,772	33.1	7,168	24.3	2,604
1896	300,000	10,378	34.5	6,953	23.2	3,425
1897	310,000	10,481	33.3	7,225	23.3	3,256
1898	340,000	11,234	33.0	7,768	22.8	3,466
1899	350,000	11,437	32.7	7,933	22.7	3,504
1900	359,000	11,192	31.2	7,642	21.3	3,550
1901	350,862	10,859	30.9	7,738	22.4	3,121
1902	360,000	11,113	30.5	7,577	20.8	3,536
1903	360,000	11,488	32.0	7,169	20.0	4,319
1904	360,000	11,323	31.6	7,474	20.8	3,849
1905	360,000	11,395	31.8	7,178	20.0	4,217
1906	366,220	11,355	31.0	7,379	20.1	3,976
1907	370,163	11,233	30.3	7,870	21.3	3,353
1908	380,344	11,490	29.7	7,523	19.5	3,967
1909	386,576	10,900	28.2	7,028	18.2	3,872
1910	391,167	10,888	27.8	7,284	18.6	3,604
1911	386,449	10,984	28.4	6,645	17.2	4,339
1912	391,974	10,884	27.8	7,111	18.1	3,733
1913	396,000	10,996	27.8	7,453	18.8	3,543
1914	399,000	11,337	28.0	7,663	18.9	3,674
1915	403,000	10,196	25.3	7,220	17.9	2,976
1916	390,000	9,415	24.1	6,496	16.7	2,919
1917	393,000	8,718	22.2	6,557	16.7	2,161
1918	393,000	9,282	23.6	8,920	22.7	362
1919	401,000	10,464	25.7	7,278	17.9	3,186
1920	413,000	12,144	29.4	7,234	17.5	4,910
1921	420,000	11,043	26.3	6,045	14.4	4,998
1922	425,000	10,667	25.1	6,304	14.8	4,363
1923	429,000	10,746	25.0	5,910	13.8	4,836
1924	434,000	10,594	23.9	6,329	14.3	4,265
1925	438,000	10,234	23.4	6,131	14.0	4,103
1926	416,000	10,356	24.9	6,411	15.4	3,945
1927	416,000	9,509	22.9	5,653	13.6	3,856
1928	415,151	9,356	22.5	5,804	14.0	3,552
1929	415,151	8,899	21.4	6,462	15.6	2,437
1930	415,151	9,558	22.7	5,451	12.9	4,107

TABLE VI.

Shewing the Annual Birth and Death Rates per 1,000 of the population of the principal Urban Sanitary Districts of Ireland.

Urban District				Births	Deaths from		
					All Causes.	Zymotic	Diseases.
Belfast	..	..	..	22.7	12.9	0.5	
Dublin (City)		..	..	25.7	15.1	1.0	
Cork	..	..	..	22.8	17.1	1.8	
Londonderry		..	..	25.9	14.2	0.9	
Bangor	..	..	..	14.3	12.5	0.2	
Limerick	..	..	..	27.4	16.3	0.7	
Waterford		..	..	24.6	15.9	1.0	
Galway	..	..	..	25.2	14.6	1.1	
Dundalk	..	..	..	18.4	12.3	0.4	
Lurgan	..	..	..	23.6	11.8	0.3	
Drogheda	..	..	..	27.6	13.7	0.6	
Lisburn	..	..	..	25.3	14.4	0.9	
Newry	..	..	..	25.6	12.5	0.4	
Portadown		..	..	28.1	13.5	0.1	
Wexford	..	..	..	21.8	13.7	0.2	
Ballymena	..	..	..	22.4	12.7	0.3	
Newtownards		..	..	21.4	12.3	0.4	
Sligo	..	..	..	20.8	13.7	1.6	
Kilkenny	..	..	..	23.0	14.9	1.5	
Tralee	..	..	..	21.4	14.3	0.6	
Clonmel	..	..	..	16.1	13.0	1.4	

TABLE VII

Comparative Table of Results in each of 53 weeks. Deaths in Public Institutions of persons *admitted from without the City omitted*

BELFAST.												WEEK ENDING																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
		Jan. 4	Jan. 11	Jan. 18	Jan. 25	Feb. 1	Feb. 8	Feb. 15	Feb. 22	Mar. 1	Mar. 8	Mar. 15	Mar. 22	Mar. 29	Apr. 5	Apr. 12	Apr. 19	Apr. 26	May 3	May 10	May 17	May 24	May 31	June 7	June 14	June 21	June 28	July 5	July 12	July 19	July 26	Aug. 2	Aug. 9	Aug. 16	Aug. 23	Aug. 30	Sept. 6	Sept. 13	Sept. 20	Sept. 27	Oct. 4	Oct. 11	Oct. 18	Oct. 25	Nov. 1	Nov. 8	Nov. 15	Nov. 22	Nov. 29	Dec. 6	Dec. 13	Dec. 20	Dec. 27	1931 Jan. 3																																																																																																																																																																																																																																																																																																																																																																																																																																										
Number of weeks in Annual Series		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53																																																																																																																																																																																																																																																																																																																																																																																																																																										
Births registered	..	221	196	160	193	167	193	189	186	167	189	191	212	182	159	220	169	198	240	223	177	164	208	190	195	185	194	173	151	175	233	180	185	173	167	155	182	197	146	175	158	172	169	173	163	195	168	162	171	152	148	172	89	201																																																																																																																																																																																																																																																																																																																																																																																																																																										
Number of Deaths	..	110	112	115	109	123	113	146	124	157	149	121	117	160	118	122	108	115	103	91	98	115	92	101	76	74	84	78	75	77	90	88	72	70	82	79	87	87	79	68	86	82	111	96	89	84	84	98	90	122	131	121	130	136																																																																																																																																																																																																																																																																																																																																																																																																																																										
Annual Death-rate per 1,000	..	13.8	14.1	14.4	13.7	15.4	14.2	18.3	15.6	19.7	18.7	15.2	14.7	20.1	14.8	15.3	13.6	14.4	12.9	11.4	12.3	14.4	11.6	12.7	9.5	9.3	10.6	9.8	9.4	9.7	11.3	11.1	9.0	8.8	10.3	9.9	10.9	10.9	9.9	8.5	10.8	10.3	13.0	12.1	11.2	10.6	10.6	12.3	12.1	15.3	16.5	15.2	18.3	17.1																																																																																																																																																																																																																																																																																																																																																																																																																																										
Ages	Under 1 year	..	14	14	15	3	23	21	16	8	17	21	19	14	17	19	15	22	19	17	17	11	7	15	16	10	9	15	13	8	10	11	7	10	12	10	16	15	18	13	13	8	13	16	9	13	16	11	10	12	15	22	17	21	16																																																																																																																																																																																																																																																																																																																																																																																																																																									
	1—5 years	..	1	12	3	8	7	4	8	6	4	14	8	6	10	10	5	6	8	3	2	7	7	8	3	5	4	4	6	4	4	7	5	..	4	5	2	5	4	4	3	3	6	6	10	3	1	3	1	6	7	9	6	11	13																																																																																																																																																																																																																																																																																																																																																																																																																																									
	5—25	..	10	9	7	11	14	14	11	10	16	18	9	16	9	9	13	3	14	7	8	6	7	10	10	8	10	10	3	10	10	4	6	9	7	11	8	9	7	6	5	12	6	12	10	3	6	3	4	12	10	8	3	9	7																																																																																																																																																																																																																																																																																																																																																																																																																																									
	25—45	..	13	8	15	13	15	11	17	18	16	17	13	12	19	19	15	14	13	12	8	17	18	15	13	11	6	11	10	10	6	12	9	9	4	9	10	9	10	7	6	11	10	13	4	7	8	10	17	12	17	7	21	10	18																																																																																																																																																																																																																																																																																																																																																																																																																																									
	45—65	..	31	27	31	36	24	31	45	28	42	37	34	26	56	20	36	35	25	31	31	21	37	21	24	18	23	28	26	21	25	33	27	22	20	26	16	23	24	28	20	24	22	40	30	27	22	33	32	28	27	37	33	40	35																																																																																																																																																																																																																																																																																																																																																																																																																																									
65 and upwards	..	41	42	44	38	40	32	49	54	62	42	38	43	49	41	38	28	36	33	25	36	39	23	35	24	22	16	20	22	22	23	34	22	23	21	27	26	24	21	21	28	25	24	33	36	31	24	34	26	46	48	41	39	47																																																																																																																																																																																																																																																																																																																																																																																																																																										
Deaths from:—																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Enteric Fever	1	1	

ANALYSIS OF DEATHS REGISTERED.

CAUSES OF DEATH.	AGE.																SEX.		TOTAL									
	Under 1 year.	1 year and under 2 years.	2 years and under 3 years.	3 years and under 4 years.	4 years and under 5 years.	Total under 5 years.	5 years and under 10 years.	10 years and under 15 years.	15 years and under 20 years.	20 years and under 25 years.	25 years and under 30 years.	30 years and under 35 years.	35 years and under 40 years.	40 years and under 45 years.	45 years and under 50 years.	50 years and under 55 years.	55 years and under 60 years.	60 years and under 65 years.		65 years and under 70 years.	70 years and under 75 years.	75 years and under 80 years.	80 years and under 85 years.	85 years and over.	Age not known.	Males.	Females.	
I. GENERAL DISEASES.																												
Common Infectious Diseases.																												
1. Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Typhoid Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Pyrexia (origin uncertain)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Scarlet Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Smallpox	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6. Diphtheria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Group ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. Erysipelas	1	1	1	1	1	67	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9. Whooping-cough	28	31	4	1	3	67	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Measles	3	3	1	1	7	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11. Influenza	2	1	..	1	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	35	36	6	2	3	82	2	..	1	2	..	1	1	3	1	2	7	5	7	5	2	1	2	64	60	124
12. Other epidemic diseases	..	1	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13. Purulent infection and septicæmia	3	1	..	1	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14. Tuberculosis of the lung	2	3	1	..	1	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15. Acute miliary tuberculosis	1	3	..	1	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16. Tuberculous meningitis	5	5	4	2	6	22	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
17. Abdominal tuberculosis	3	..	1	2	2	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18. Other forms of tuberculosis	..	1	2	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
19. Rickets	3	4	..	..	..	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20. Syphilis	3	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
21. Cancer and other malignant tumors	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22. Other tumors	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23. Acute articular rheumatism	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
24. Chronic rheumatism and gout	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25. Diabetes	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
26. Exophthalmic goitre	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
27. Debility	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
28. Leuchæmia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
29. Anæmia, chlorosis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
30. Other general diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
31. Alcoholism (acute or chronic)	3	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
32. Chronic lead poisoning	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	24	18	9	6	11	68	18	25	76	115	76	70	77	54	89	109	100	114	104	91	40	12	4	..	590	652	1242	

TABLE VIII. (continued).

CAUSES OF DEATH.	AGE.																			SEX.								
	Under 1 year.	1 year and under 2 years.	2 years and under 3 years.	3 years and under 4 years.	4 years and under 5 years.	Total under 5 years.	5 years and under 10 years.	10 years and under 15 years.	15 years and under 20 years.	20 years and under 25 years.	25 years and under 30 years.	30 years and under 35 years.	35 years and under 40 years.	40 years and under 45 years.	45 years and under 50 years.	50 years and under 55 years.	55 years and under 60 years.	60 years and under 65 years.	65 years and under 70 years.	70 years and under 75 years.	75 years and under 80 years.	80 years and under 85 years.	85 years and over.	Age not known.	Males.	Females.	TOTAL	
II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SENSE.																												
32a. Hydrocephalus ..	1	1			1	3																				1	2	3
33. Encephalitis ..					1	1																				13	8	21
34. Meningitis ..	11	3	3	1	2	20	6	3			3			1	2	1	1	1								20	20	40
{ 1. Simple meningitis																												
{ 2. Cerebro-spinal men- ingitis (undefined)																												
{ 3. Cerebro-spinal fever																												
35. Locomotor ataxia ..																												
36. Other diseases of the spinal cord ..																												
37. Cerebral hemorrhage, apoplexy ..	1					1																				7	4	11
38. Softening of the brain ..	3					3																				107	140	247
39. Paralysis without specified cause ..																										2	2	8
40. General paralysis of the insane ..																										2	2	4
41. Epilepsy ..																										3	3	3
42. Convulsions (non-puerperal) ..																										5	5	8
43. Convulsions of infants ..																												
44. Chorea ..	36	9				45																				24	21	45
45. Neuralgia and Neuritis ..																												
46. Other diseases of the nervous system ..																										3	3	6
47. Diseases of the eyes ..																										14	12	26
48. Diseases of the ears ..	2	1		1		4	3		1		1		2				1									9	3	12
Totals of nervous system, etc. ..	54	14	3	2	4	77	11	6	7	6	7	5	12	8	22	25	41	47	47	56	33	19	7		212	224	436	436
III. DISEASES OF THE CIRCULATORY SYSTEM.																												
49. Pericarditis ..																												
50. Acute endocarditis ..																												
51. Organic diseases of the heart ..	6	2				9	3	7	15	8	3	14	15	25	35	64	89	123	126	114	80	31	19		365	415	780	780
52. Angina pectoris ..																										10	11	21
53. Diseases of the Arteries, atheroma, aneurism, etc. ..																												
54. Embolism and thrombosis ..																												
55. Diseases of the veins (varices, hæmorrhoids, phlebitis, etc.) ..																												
56. Diseases of the lymphatic system (lymphangitis, etc.) ..																												
57. Hæmorrhage; other diseases of the circulatory system ..	2					2																				1	2	3
Totals of circulatory system ..	8	2				12	4	11	22	16	9	15	21	29	47	89	120	172	168	172	102	46	23		520	558	1078	1078

CAUSES OF DEATH.	AGE.																SEX.												
	Under 1 year.	1 year and under 2 years.	2 years and under 3 years.	3 years and under 4 years.	4 years and under 5 years.	Total under 5 years.	5 years and under 10 years.	10 years and under 15 years.	15 years and under 20 years.	20 years and under 25 years.	25 years and under 30 years.	30 years and under 35 years.	35 years and under 40 years.	40 years and under 45 years.	45 years and under 50 years.	50 years and under 55 years.	55 years and under 60 years.	60 years and under 65 years.	65 years and under 70 years.	70 years and under 75 years.	75 years and under 80 years.	80 years and under 85 years.	85 years and over.	Age not known.	Males.	Females.	TOTAL		
IV. DISEASES OF THE RESPIRATORY SYSTEM.																													
57a. Asphyxia ..	2	10	4	..	..	2	..	1	4	2	..	..	2	10	9	19	34	26	38	42	19	11	8	..	..	1	2	
58. Acute bronchitis ..	32	34	11	..	..	47	..	2	..	..	..	..	4	3	8	14	12	23	30	42	12	9	3	..	..	129	143	
59. Chronic bronchitis ..	73	34	8	..	..	128	4	2	..	..	1	1	3	3	4	7	6	7	23	30	3	2	3	..	..	83	57	
60. Broncho-pneumonia ..	33	18	3	3	9	66	3	2	3	5	4	5	6	9	10	7	13	12	12	5	15	3	4	..	..	89	87	
61. Pneumonia ..	..	..	..	..	..	..	..	..	1	..	..	1	1	1	3	3	2	1	1	..	..	3	..	..	..	100	84	
62. Pleurisy ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	7	
63. Gangrene of the lung ..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	2	4	1	..	5	1	..	3	2	..	..	17	11	
64. Asthma ..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65. Pulmonary emphysema ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
66. Other diseases of the respiratory system (tuberculosis excepted) ..	1	2	..	1	..	4	1	2	2	4	..	3	1	3	5	3	2	..	3	2	1	..	..	..	..	17	19	
Totals of respiratory system ..	141	64	19	12	12	248	8	7	11	11	5	11	16	35	41	53	89	60	86	85	50	28	17	..	..	442	410	
V. DISEASES OF THE DIGESTIVE SYSTEM.																													
67. Ulcer of the Stomach ..	..	..	..	..	..	..	..	..	..	2	1	..	2	..	2	2	2	5	2	1	2	..	..	..	..	12	9	21
68. Other diseases of the Stomach (cancer excepted) ..	10	13	3	1	4	108	4	..	..	..	1	1	1	1	1	2	2	4	4	2	2	1	..	..	..	12	18	30
69. Diarrhoea and enteritis ..	87	..	..	..	..	..	3	11	3	1	2	2	1	1	..	..	2	2	1	1	1	1	1	..	..	64	67	131
70. Appendicitis and typhilitis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	15	13	28
71. Hernias, intestinal obstructions ..	2	1	..	..	..	3	1	..	..	..	1	1	3	2	1	6	10	7	8	6	2	1	1	..	..	24	29	53
72. Other diseases of the intestine ..	4	..	1	..	..	5	1	..	..	..	1	2	2	..	2	3	3	2	4	1	3	1	1	..	..	17	13	30
73. Acute yellow atrophy of the liver ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
74. Hydatid tumour of the liver ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
75. Cirrhosis of the liver	1	1	1	2	1	4	2	1	1	1	10	5	15
76. Biliary calculi	4	8	26
77. Other diseases of the liver ..	1	..	..	..	..	1	..	..	..	..	1	1	1	1	1	4	1	5	6	2	3	..	..	..	..	11	15	26
78. Simple peritonitis (non-puerperal) ..	..	1	..	..	..	2	1	..	2	2	..	2	2	1	1	1	3	..	2	1	..	..	..	..	..	4	11	15
79. Other diseases of the digestive system (cancer and tuberculosis excepted) ..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals of digestive system ..	104	16	4	1	5	130	10	11	5	7	7	9	13	6	12	22	30	29	32	16	17	4	1	..	..	1	2	3
VI. NON-VENEREAL DISORDERS OF THE GENITO-URINARY SYSTEM.																													
80. Acute nephritis ..	..	..	..	..	..	..	..	..	..	..	4	4	5	1	5	4	2	7	6	1	1	..	1	..	..	14	27	41
81. Bright's disease ..	..	..	..	..	..	1	..	1	2	1	1	1	2	1	7	5	17	7	8	7	3	3	..	..	..	35	31	66
82. Other diseases of the kidneys ..	..	..	..	..	..	..	..	1	..	1	..	1	1	4	3	9	3	2	3	2	1	..	..	..	..	21	11	32
83. Calculi of the urinary passages ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
84. Diseases of the Bladder ..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	1	2	..	2	4	2	1	1	..	..	11	5	16
85. Diseases of the prostate ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	6	2	6	9	6	6	..	..	..	36	..	36
86. Hemorrhage ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
87. Tumor (non-cancerous) ..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	1	..	..	..	2	..	..	..	..	..	..	..	4	4
88. Other diseases of the uterus ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals of genito-urinary system ..	1	..	..	..	..	1	..	2	3	2	5	7	10	10	16	20	30	18	27	23	13	10	2	..	..	117	82	199

	AGE.																SEX.											
	Under 1 year.	1 year and under 2 years.	2 years and under 3 years.	3 years and under 4 years.	4 years and under 5 years.	Total under 5 years.	5 years and under 10 years.	10 years and under 15 years.	15 years and under 20 years.	20 years and under 25 years.	25 years and under 30 years.	30 years and under 35 years.	35 years and under 40 years.	40 years and under 45 years.	45 years and under 50 years.	50 years and under 55 years.	55 years and under 60 years.	60 years and under 65 years.	65 years and under 70 years.	70 years and under 75 years.	75 years and under 80 years.	80 years and under 85 years.	85 years and over.	Age not known.	Males.	Females.	TOTAL	
VII. PUERPERAL STATE.																												
89. Accidents of pregnancy	..	..	..	..	..	..	..	..	..	2	2	2	3	1	1	..	..	..	..	..	..	..	..	..	..	..	11	11
90. Puerperal hemorrhage	..	..	..	..	..	..	..	..	..	1	..	4	2	2	..	..	..	..	..	..	..	..	..	..	..	..	9	9
91. Other accidents of labour	..	..	..	..	..	..	..	..	..	3	3	2	2	1	..	..	..	..	..	..	..	..	..	..	..	..	11	11
92. Puerperal septicaemia	..	..	..	..	..	..	..	..	..	3	..	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	8	8
93. Puerperal albuminuria and convulsions	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3
93a. Eutocia	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Totals of puerperal state	..	..	..	..	..	..	..	..	..	9	6	11	12	4	1	..	..	..	..	..	..	..	..	..	..	..	43	43
VIII. DISEASES OF THE SKIN AND OF THE CELLULAR TISSUE.																												
94. Gangrene	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	3	6	8	..	..	..	1	..	..	12	8	20
95. Acute Abscess	..	1	..	..	..	3	1	..	..	..	..	..	..	..	..	2	1	..	..	..	..	..	..	..	..	4	3	7
96. Other diseases of the skin	..	4	..	..	..	5	..	1	..	..	..	1	..	..	1	3	3	4	2	1	1	..	..	..	..	13	9	22
Totals of skin tissue	6	2	..	..	..	8	1	1	..	..	..	1	..	..	2	5	5	7	8	9	1	..	1	..	..	29	20	49
IX. DISEASES OF THE BONES AND OF THE ORGANS OF LOCOMOTION.																												
97. Diseases of the bone* (tuberculosis excepted)	..	..	2	..	2	2	4	1	2	1	..	1	..	..	..	..	2	..	..	..	..	..	..	..	..	10	3	13
98. Diseases of the joints (tuberculosis and rheumatism excepted)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	1	1	2
99. Amputations	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
100. Other diseases of the organs of Locomotion	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals of bones and organs of locomotion	..	..	2	..	..	2	4	1	2	1	..	1	..	..	1	..	3	..	..	..	..	..	..	..	..	11	4	15
X. MALFORMATIONS.																												
101. Congenital malformations (stillbirths not included)	43	1	..	1	..	45	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	21	24	45
XI. DISEASES OF EARLY INFANCY.																												
102. Congenital debility icterus, and sclerema	295	3	..	..	..	298	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	179	119	298
103. Other accidents at birth	4	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	4
104. Inattention at birth	5	..	..	..	..	5	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1	4
105. Other diseases peculiar to early infancy	22	..	..	..	..	22	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	14	22
Totals of early infancy	326	3	..	..	..	329	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	190	139	329
XII. OLD AGE.																												
106. Senility	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	10	21	71	82	62	74	..	..	110	211	321

TABLE VIII. (continued).

CAUSES OF DEATH.	AGE.																			SEX.		TOTAL					
	Under 1 year.	1 year and under 2 years.	2 years and under 3 years.	3 years and under 4 years.	4 years and under 5 years.	Total under 5 years.	5 years and under 10 years.	10 years and under 15 years.	15 years and under 20 years.	20 years and under 25 years.	25 years and under 30 years.	30 years and under 35 years.	35 years and under 40 years.	40 years and under 45 years.	45 years and under 50 years.	50 years and under 55 years.	55 years and under 60 years.	60 years and under 65 years.	65 years and under 70 years.	70 years and under 75 years.	75 years and under 80 years.		80 years and under 85 years.	85 years and over.	Age not known.		
	Males.	Females.																									
XIII. AFFECTIONS PRODUCED BY EXTERNAL CAUSES.																											
107. Suicide by poison		
108. Suicide by asphyxia		
109. Suicide by hanging or strangulation		
110. Suicide by drowning		
111. Suicide by firearms		
112. Suicide by cutting or piercing instruments		
113. Other suicides		
114. Poisoning by food		
115. Other acute poisonings		
116. Burns		
117. Absorption of deleterious gases		
118. Accidental drowning		
119. Traumatism by cutting or piercing instruments		
120. Traumatism by fall		
121. Traumatism by machines		
122. Excessive cold		
123. Effects of heat		
124. Homicide by firearms		
125. Homicide by cutting or piercing instruments		
126. Homicide by other means		
127. Fractures (causes not specified)		
128. Other external violence		
128a. Post Operative shock		
Totals of affections by external causes ..	2	5	6	6	..	19	2	5	6	8	9	7	11	11	9	12	21	7	7	9	4	2	3	..	98	58	156
XIV. ILL-DEFINED DISEASES.																											
129. Ill-defined organic disease	
130. Sudden death	
131. Cause of death not specified or ill-defined	
Totals of ill-defined diseases	
Totals from all causes ..	744	161	49	30	37	1021	66	132	175	123	140	169	160	243	335	428	483	507	537	345	184	134	2579	2672	5251

TABLE IX.

Shewing the Number of Deaths registered as having been caused by Phthisis and Diseases of the Respiratory Organs during the twenty-one years, 1910-1930 :—

Year.	Population	Phthisis	Rate per 1,000	Diseases of the Respiratory System			Total Chest Affections
				Pneumonia	Others	Total	
1910	391,167	825	2.1	622	916	1,538	2,363
1911	386,449	802	2.1	468	788	1,256	2,058
1912	391,974	802	2.0	799	981	1,780	2,582
1913	396,000	844	2.1	665	868	1,533	2,377
1914	399,000	836	2.1	701	929	1,630	2,466
1915	403,000	813	2.0	738	929	1,667	2,480
1916	390,000	830	2.1	506	670	1,176	2,006
1917	393,000	932	2.4	614	825	1,439	2,371
1918	393,000	1,051	2.7	1,412	1,608	3,020	4,071
1919	401,000	853	2.1	712	1,104	1,816	2,669
1920	413,000	762	1.8	800	766	1,566	2,328
1921	420,000	677	1.6	511	520	1,031	1,708
1922	425,000	624	1.5	594	648	1,242	1,866
1923	429,000	571	1.3	564	573	1,137	1,708
1924	434,000	605	1.4	623	720	1,343	1,948
1925	438,000	575	1.3	517	646	1,163	1,738
1926	416,000	570	1.4	516	630	1,146	1,716
1927	416,000	515	1.2	479	526	1,005	1,520
1928	415,151	499	1.2	521	542	1,063	1,562
1929	415,151	485	1.2	680	761	1,441	1,926
1930	415,151	436	1.0	357	482	839	1,275

GENERAL PROVISIONS OF HEALTH SERVICES FOR THE AREA.

Hospitals Provided or Subsidised by the Sanitary Authority or by The County Council.

- A. (1) Fever.
 (2) Smallpox.

Purdysburn Fever Hospital, with accommodation for 168 patients, was opened for the reception of persons suffering from infectious diseases in August, 1906.

The Hospital is built on the pavilion system, separate blocks being provided for each of the notifiable infectious diseases, with separate administration block, nurses' home, etc., and a suitable isolation block.

The accommodation soon proved insufficient, and in the year 1911 the Public Health Committee decided to increase the accommodation by two additional two-storey buildings and by enlarging the diphtheria block. This extension provided accommodation for 100 beds, bringing the total up to 268 beds. Even with the additional accommodation thus provided the hospital on several occasions, especially during the recurring epidemics of scarlet fever, proved to be far short of the city's requirements, and in the years 1922 and 1923 the Corporation authorised the enlargement of Nos. 3 and 4 pavilions respectively, together with the provision of additional accommodation for the staff and a new laboratory. These extensions brought the accommodation up to 312 beds.

There is a Smallpox Hospital situated in the same grounds but completely isolated in its own compound. It is self-contained having accommodation for 50 patients in four pavilions with separate administration block and nurses' home and an isolation pavilion.

The staff at the end of the year consisted of:—

- 1 Medical Superintendent.
- 1 Resident Medical Officer.
- 1 House Physician.
- 1 Temporary House Physician.
- 1 Steward.
- 1 Clerk.
- 1 Storekeeper.
- 1 Engineer.
- 2 General Mechanics.
- 3 Motor Drivers.
- 1 Van Man.
- 4 Firemen.
- 1 Pumping Station Engine Man.
- 5 Day Porters.
- 1 Gate Porter.
- 1 Night Porter.
- 1 Disinfector.
- 1 Foreman Gardener.
- 3 Groundsmen.
- 1 Matron.
- 1 Assistant Matron.
- 1 Night Superintendent.
- 1 do. joint.
- 1 Housekeeper.
- 9 Ward Sisters.
- 42 Nurses.
- 1 Seamstress.
- 1 Head Laundress.
- 5 Laundry Maids.
- 1 Cook.
- 3 Kitchen Maids.
- 5 General Maids.
- 15 Ward Maids.

Union Fever Hospital.

The accommodation for patients in the Union Fever Hospital is 450 beds. The number of patients treated during the year 1930 was 1,265.

The Hospital is under the control of the Belfast Board of Guardians.

The following is a list of the diseases from which the patients were suffering :

Typhoid Fever	..	..	..	6
Measles	..	..	..	29
Scarlatina	..	..	..	89
Whooping Cough	..	..	..	108
Mumps	..	..	..	18
Chicken Pox	..	..	..	83
Erysipelas	..	..	..	73
Diphtheria	..	..	..	33
General Medical	..	..	..	292
Rubella	..	..	..	127
Pneumonia	..	..	..	25
Tonsilitis	..	..	..	234
Epidemic Encephalitis	..	..	..	2
Chronic Encephalitis	..	..	..	40
T.B. Meningitis	..	..	..	10
Influenza	..	..	..	84
Cerebro—Spinal Fever	..	..	..	8
Tetanus	..	..	..	1
Acute Poliomyelitis	..	..	..	1
Pneumococcal Meningitis	..	..	..	2

1,265

Tuberculosis :—

Belfast Municipal Sanatorium, Whiteabbey.

- A. Specify the hospitals available for the area, and, if they are supported wholly or partly by the Council, note their situation and the extent and nature of the present accommodation.
- B. Any Institutional Provision for unmarried mothers, illegitimate infants and homeless children in the area.
-

A. The principal hospitals available for the area which do not come within the scope of "grant" are as follows. All these are honoured and esteemed by all men who realise the admirable work carried out from year to year therein :

The Royal Victoria Hospital.
The Mater Infirmorum Hospital.
Queen Street Children's Hospital.
The Benn Hospital.
Samaritan Hospital.
Hospital for Nervous Diseases, Claremont Street.
Ophthalmic Hospital, Great Victoria Street.
The Throne Hospital.

It should be understood that this list is not necessarily a complete one.

Hospitals Wholly or Partly Supported by the Council.

- (1) Tuberculosis. (2) Maternity. (3) Children.
(4) Orthopaedic. (5) Other.

(1) **Tuberculosis.** While the Reports on Graymount and Whiteabbey Sanatoria, by my colleagues Drs. Trimble and Walker, will be found in the body of this Report, the following particulars will be of interest :—

Municipal Sanatorium, Whiteabbey.		Municipal Hospital for Tuberculosis Children, Graymount, and Open-air Day School.
Extent	.. 33 acres.	15 acres and 2 roods.
No. of Beds	.. 285 (all forms).	58 (non-pulmonary) 150 Places for delicate contactst a Day School.
No. of Teachers	.. Two.	Four.
Hours of School	.. 9-15 a.m.—3-15 p.m.	9-30 a.m.—2-30 p.m. Winter. 9-30 a.m.—3-30 p.m. Summer. (including rest hour and dinner).
Accommodation for Nurses	.. 16 bedrooms and 3 sitting rooms.	1 bed-sitting room 2 sitting rooms. 7 bedrooms.
Visiting Days	.. Wednesdays and Sundays 2 till 4 p.m.	Wednesdays and Sundays. 2 till 4 p.m.

STAFF COMPLEMENT.

GENERAL STAFF.

Medical Superintendent	..	1
Assistant Medical Officers	..	2
Visiting Surgeon	..	1
Visiting Dental Surgeon	..	1
Visiting Chaplains	..	3

ENGINEERING STAFF.

Engineer	..	1
Assistant	..	1
Firemen	..	4

NURSING STAFF.

Matron	..	1
Sisters	..	5
Staff Nurses	..	5
Probationers	..	20

OUTDOOR STAFF.

Gardener	..	1
Assistant Gardener	..	1
Carpenter	..	1
Assistant to Carpenter	..	1
Porters	..	3
Labourers	..	4

CLERICAL STAFF.

Steward	..	1
Clerks	..	2

DOMESTIC STAFF.

Sewing Mistress	..	1
Cooks	..	2
Maid, etc.	..	19

OPEN-AIR SCHOOLS.

Mistresses	..	2
------------	----	---

(2) **Maternity.** The Maternity Hospital is situated in Townsend Street and a grant of £1,000 per annum is paid by the Corporation. There are four wards and two rooms containing 27 beds. For ante-natal cases there are 3 couches, one dispensary sister being in charge. The staff consists of the matron, intern sister (day), intern sister (night), two staff nurses, and twelve probationers.

As regards payment for treatment, maternity patients are charged at the rate of six shillings per day. In all cases, however, where the circumstances are poor, no charge is made—no poor woman has ever been turned away.

The staff of surgeon accoucheurs consists of four honorary and two resident medical officers, the senior of whom is the tutor. In addition there is one non-resident registrar, also one physician to Infants' Department.

Close co-operation exists between this hospital and the Public Health Department. Practically every week a telephone message is received with reference to some case or other in which assistance can be given by the Department in "following up." Such may be cases in which a woman leaves before the doctors wish her to do so; this is an extremely foolish thing to do as the life or health of the mother may thus be imperilled. The Townsend Street Maternity Hospital is justly honoured and respected for the high excellence of the work encompassed. With the passing of time and the increasingly high reputation of this institution with inevitable increased calls upon its accommodation, it has been felt necessary to build a larger hospital and this is now approaching completion within the grounds of the Royal Victoria Hospital.

The accommodation to be provided consists of 100 beds. A ground floor ward will contain 44 maternity beds and a separate ward of 20 beds will be used by paying patients. Every modern improvement will be found: the building and arrangements are admirable. Nurseries, Ante-Natal Out-Patients, Ante-Natal Ward, Isolation Ward, Mothers' Instruction Room, Work Room and Rest Room, Class Room, Study Rooms, and a Laboratory will form part of a great whole.

ANTE NATAL REPORT FOR THE YEAR ENDED 31st DECEMBER, 1930.

Total number of new patients	..	..	..	..	..	1,831
do. re-attendances	..	..	..	..	..	4,124
						<hr/>
Total examinations	..	..	..	..	..	5,955
						<hr/>

The Ante-Natal Patients admitted to the Hospital were as follows:—

For confinement	..	..	..	..	..	469
treatment and confinement	..	..	..	..	..	40
treatment ..	..	..	..	..	..	235
operations	..	..	..	..	..	32
						<hr/>
						776
Non Ante-natal patients admitted to Hospital	..	..	..	..	..	226
						<hr/>
Total admissions during year	..	..	..	..	..	1,002
						<hr/>
Ante-Natal patients confined in District	..	..	..	..	..	231
Non Ante-Natal patients do.	..	..	..	..	..	23
						<hr/>
						254
						<hr/>

(2) **Maternity.** (3) **Children.**

Thorndale House (The Salvation Army) is situated in its own grounds, Duncairn Avenue. The site is somewhat unique, this institution being relatively isolated on rising ground, thus receiving the maximum of sunshine and air perfusion. The assistance of the lady in charge, Major Goodwin, was sought in the preparation of these notes and perhaps the best thing to do would be to give the report as written by her.

MAJOR GOODWIN'S REPORT.**Thorndale House.**

Reports on the various Sections of work carried on at above home during 1930.

There are the following Departments :—

- (1) A Maternity Home for the unmarried mother.
- (2) Wards for Private patients.
- (3) An Industrial Home for young girls.
- (4) An After-care Home for those who have gone through our hands.

Maternity Home. Here we have accommodation for 26 expectant unmarried mothers, and the following is a brief review of the work done during 1930 in this department.

- 22 in Home beginning of year.
- 40 Confinements took place.
- 21 Girls sent to situations.
- 20 Girls sent home to friends.
- 1 Girl made Helper in the Home.
- 21 Babies sent to Nurse Mothers.
- 19 Babies sent to Friends.
- 1 Baby sent to Infirmary.
- 1 Baby died.
- 16 Babies Fathers' were found and the case affiliated.
- 29 Girls in Home end of year.
- 25 Babies in Home end of year.

Most of these girls sent out were kept from four to six months after the birth of child so that the little one might be breast fed and by that means give it a fair chance at the beginning of its life as well as the mother.

Private Patients' Department. 36 confinements took place in this connection—these last months some of the patients were unable to come into the Home for domestic reasons and we attended them on the District. Attached also to this is the Antenatal and the Baby Clinic for the weighing of the little ones and the giving of advice generally to mothers.

This work is on the increase and we are desirous for this to be more widely known amongst married people so that we may seek to serve the tired mothers who have so little convenience in their own homes—a very moderate charge is made indeed.

Aftercare Home. The secret of success is keeping in touch with the girls after they have left the Home. At this department the girls can return when they have their free time, out of a situation or for a holiday—they may bring their little ones from the Nurse Mothers and remain until it is time for them to return to their situation. An Officer is set apart for this work and arranges to have Tea Table talks to seek to guide, counsel and instruct her many Associates. The visits per month average over 700.

Including information which we consider worthy of special mention as desired, is the Industrial Home and the Police Court. The Industrial Home, a small

corner which is set apart for many young motherless girls. The Police Courts are visited three times per week by our Officers who are ready to receive from the Magistrate the first Offender thus saving the young person who would otherwise have the stigma of prison on them.

Shelter for Poor and Stranded Women. Here there is accommodation for 30 women. Temporary help is given and situations found, and also many free beds and meals are provided.

The Belfast Midnight Mission and Rescue and Maternity Home.

This Home was founded in 1860 and is situated at No. 29 Malone Place. This institution is carrying out work of a high order, which included the admission to the Rescue Ward of 263 women who received one or more night's lodging and food—some indeed, remained up to fourteen days in residence.

During the year there were 119 confinements, 36 of which were private patients (married); 5 babies were still-born; 1 infant died, and 1 mother died; this is very successful work. 3 patients were admitted for treatment, while 46 women were attended on the district by the nurses. 97 expectant mothers were seen at the ante-natal clinic by Dr. Robb, with 242 attendances.

Infants born here are kept in the institution until such time as a good foster mother can be arranged for—where such is desired. The accommodation is made up of 27 beds for unmarried mothers placed in five wards; one of these has 14 beds, another has 7. Two rooms have 3 beds each for private patients.

The ante-natal department consists of one examination room and two waiting rooms.

A fee of two guineas per week is charged for private patients.

The staff consists of the matron and three nurses holding the C.M.B., together with four probationers.

The Ulster Hospital, Templemore Avenue.

This excellent Hospital receives a grant of £250 from the Corporation annually. During 1930 there were 865 intern admissions to the Children's department while 7,840 out-patients were treated. 253 women were admitted and 1,967 out-patients received attention. The new cases in the Maternity department numbered 144. 1,906 operations were performed. For Maternity cases there are two beds in one ward; there are ten additional beds in another ward for women. For children the accommodation consists of 40 cots in two wards; there are two balconies; one isolation ward and a sun parlour.

The Ante Natal cases treated in this Hospital during the year were as follows :

New cases in Out-patient Department	..	185
Return cases in Out-patient Department	..	422
Cases admitted to Hospital	..	57

Out of the 865 intern admissions to the Children's Department, 46 died, giving a death rate of only 5.3 per cent.

The resident staff consists of :—

- 2 House Surgeons.
- 1 Matron.
- 3 Sisters.
- 1 Surgical Sister.
- 1 District Sister.
- 18 Probationers.
- 1 Masseuse (part-time).
- 1 Sister Tutor (part-time).

St. Joseph's Babies' Home.

This institution receives a grant of £200 from the Corporation. The staff consists of a medical officer, a qualified matron, and two qualified nurses, one for day and one for night duty ; there is also a staff of probationer nurses.

The infants admitted here are mostly illegitimate and a proportion of these come from outside the city. The following are the statistics for 1930 :—

Cases admitted in 1930	..	..	64
Deaths among cases admitted in 1930	..	..	21
Total deaths in 1930, including admissions prior to 1930	..	..	25
Deaths occurring in 1930 in other institutions to which cases were removed	..	..	9
No. of cases admitted occurring in mothers not residents of the city during 1930	..	..	19 of the 64 children admitted were born outside the city ; 28 of the mothers had "outside addresses."
Births status of the dead	..	..	24 of the 25 were illegitimate.
Percentage of deaths of children admitted during 1930	..	..	32.8%

AMBULANCE FACILITIES.

(a) **For Infectious Cases.**

(b) **For Non-Infectious and Accident Cases.**

(a) **Infectious Cases.**

Three ambulances (the property of the Belfast Corporation and garaged at Purdysburn Fever Hospital) are available for the conveyance of Infectious Diseases cases to this Hospital.

Three ambulances (the property of the Belfast Board of Guardians and garaged at Union Workhouse) are available for the conveyance of all stretcher cases to the Union Hospitals. These cases include the removal of the minor Infectious Diseases, such as Measles, Whooping Cough, etc.

All the above ambulances are disinfected on return after each journey.

(b) **Non-Infectious Cases.**

Four ambulances the property of the Belfast Corporation and garaged at the Central and Branch Fire Brigade Stations are available for the conveyance of non-infectious cases. Each removal (except accident cases) must be so certified by a medical practitioner. These ambulances are at the call of any person in the case of accidents. They can also be required to remove a bedridden patient to or from a Nursing Home. There is a fee of one guinea charged where the person requisitioning the ambulance is able to pay.

CLINICS AND TREATMENT CENTRES.

1. **Maternity and Child Welfare.**

NAME.	SITUATION.	ACCOMMODATION.	DOCTOR'S SESSIONS
Danube Street	North Belfast Working Men's Club, Danube St.	Child Welfare Clinic.	Mondays, 2-30—5 p.m.
Donegall Road	Cripples' Institute, Donegall Road.	Child Welfare Clinic and Artificial Light.	Mondays, 2-30—5 p.m.
Dee Street	Dee Street Mission, Ballymacarrett.	Child Welfare Clinic and Artificial Light.	Tuesdays, 2-30—5 p.m.
Falls Road	Public Library, Falls Road.	Child Welfare Clinic.	Tuesdays, 2-30—5 p.m.
York Street	Co-Operative Hall, Frederick Street	Child Welfare Clinic.	Wednesdays, 2-30—5 p.m.
Shankill Road	Albert Hall, Shankill Rd.	Child Welfare Clinic.	Thursdays, 2-30 5—p.m.
Charlotte Street	Mission Hall, Charlotte Street.	Child Welfare Clinic.	Wednesdays, 3—5 p.m.
Belfast Maternity Hospital	Townsend Street.	Ante-Natal Clinic.	Wednesdays and Saturdays, 9-30 a.m.—12 noon
Ulster Hospital	Templemore Avenue.	Ante-Natal Clinic.	

2. **Tuberculosis Clinics.**

Central Tuberculosis Institute, Durlam Street.
Tuberculosis Institute, 225 Albertbridge Road.

Daily 9-30 a.m.—5 p.m.
Daily 9-30 a.m.—5 p.m.

3. School Clinics.

Central Clinic, Old Town Hall, Victoria Street.

ACCOMMODATION.	DOCTOR'S SESSIONS.
Inspection Clinic.	Daily, 2—5 p.m. (except Saturdays)
Minor Ailments Clinic.	Tuesdays and Thursdays at 3 p.m., Saturdays at 10 a.m.
Eye, Ear, Nose and Throat Clinics.	Mondays, Tuesdays, Wednesdays, and Thursdays at 10 a.m. Alter- nate Tuesdays and Thursdays— Operations.
Tonsils and Adenoids Operation Clinic.	Every alternate Tuesday and Thursday.
Dental Clinics.	Daily (except Saturdays) 9-30 a.m.
Artificial Light Clinic.	Tuesdays and Fridays 9-30 a.m.
Head Cleansing Clinic.	Daily (except Saturdays) 9-30 a.m.
Special Case Clinic.	Every Saturday 9-30 a.m.

North-West Clinic, 4 Crumlin Road.

Inspection Clinic.	Daily (except Saturdays) 2—5 p.m.
Minor Ailments Clinic.	Tuesdays, Thursdays, 3 p.m. Saturdays 10 a.m.
Eye (Tuesdays, 10 a.m.) Nose and Throat (Saturdays 10 a.m.) Clinics.	
Dental Clinics.	Daily (except Thursdays and Saturdays) 9-30 a.m.
Artificial Light Clinic.	Mondays 9-30 a.m., Thursdays 9-30 a.m.
Head Cleansing.	Daily (except Saturdays) 9-30 a.m.
Special Case Clinic.	Every Saturday 9-30 a.m.

Ballymacarrett Clinic, The Mount.

Inspection Clinics.	Mondays, Wednesdays, Thursdays and Fridays, 2—5 p.m.
Minor Ailments Clinics.	Tuesdays and Thursdays 3 p.m. Saturdays 10 a.m.
Eye (Tuesdays, 2 p.m.) Nose and Throat (Fridays 2 p.m.) Clinics.	
Dental Clinic.	Mondays, Wednesdays, Thursdays and Fridays 9-30 a.m.
Head Cleansing Clinic.	Daily at 9-30 a.m. (except Saturdays.)
Special Case Clinic.	Saturdays at 9-30 a.m.

4. Venereal Diseases Clinics.

Royal Victoria Hospital, Grosvenor Road.	Daily 9 a.m.—11 a.m. Mondays 7 p.m.—8 p.m.
Mater Infirmorum Hospital, Crumlin Road.	Tuesdays and Saturdays 9-30 a.m.—11-30 a.m. Thursdays 8 p.m.—10 p.m.
Union Infirmary, Lisburn Road.	Daily from 11 a.m., for admissions.

STAFF.**Medical Superintendent Officer of Health and Port Medical Officer :**

CHARLES SAMSON THOMSON, M.D., CH.B., D.P.H. (Hons), B.Hy. (Hons)
F.R.S.I., F.R.I.P.H., F.I.H. (Lecturer in Practical Public Health Administration
and Intern Examiner, Queen's University, Belfast).

**Assistant Medical Superintendent Officer of Health, Assistant Port Medical Officer,
and Executive Sanitary Officer :**

SAMUEL BARRON, M.R.C.P., D.P.H.

Chief Tuberculosis Officer :

ANDREW TRIMBLE, M.B., D.P.H., J.P., Medical Adviser Belfast Insurance
Committee.

Chief School Medical Officer :

THOMAS F. S. FULTON, M.B., B.Ch., D.P.H.

Medical Superintendent, Purdysburn Fever Hospital :

A. GARDNER ROBB, M.B., B.Ch., D.P.H., Visiting Medical Officer, Belfast
Union Fever Hospital.

Resident Medical Superintendent, Municipal Sanatorium, Whiteabbey :

PERCY S. WALKER, M.D., B.Ch., D.P.H.

Visiting Surgeon, Municipal Hospital for Tuberculous Children, Graymount :

HENRY P. MALCOLM, M.C., M.B., M.Ch.

City Bacteriologist :

GEORGE F. TINSDALE, M.B., B.Ch., B.Sc.

Maternity and Child Welfare Medical Officers :

OLIVE M. DARLING, M.B., B.Ch., D.P.H.	(part-time).
OLIVE M. ANDERSON, M.B., B.Ch., B.A.O.	do.
ANNA WATSON, M.B., B.Ch., B.A.O., D.P.H.	do.

Veterinary Inspector, Diseases of Animals Acts :

J. EWING JOHNSTON, M.B.E., M.R.C.V.S. (part-time).

City Veterinarian and Veterinary Inspector of Dairies and Cowsheds :

CAPTAIN J. McCLURE BARRY, M.R.C.V.S.

Public Analyst :

J. HAROLD TOTTON, B.A., B.Sc., F.I.C.

Assistant Tuberculosis Medical Officers :

J. SHAW, M.B., B.Ch., D.P.H.
T. R. V. IRWIN, M.B., B.Ch., D.P.H.
E. P. DEWAR, L.R.C.P. Ed.
H. McMASTER, L.R.C.P. Ed., D.P.H.

Assistant School Medical Officers :

H. A. WARNOCK, M.D., D.P.H., B.Sc.
 MAUD McKNIGHT, M.B., D.P.H.
 EILEEN H. DOWSE, M.B., D.P.H. (part-time).
 ANNA PARK, M.B., D.P.H.

Resident Medical Officers :

F. KANE, M.B., Purdysburn Fever Hospital.
 J. W. BROWNE, M.B., Purdysburn Fever Hospital.
 D. K. WATTERSON, M.D., D.P.H., Whiteabbey Sanatorium.
 A. LAVELLE, M.B., Whiteabbey Sanatorium.

Visiting Medical Officer, Whiteabbey Sanatorium :

J. C. RANKIN, M.D., B.Ch.

Ophthalmic Specialists, etc. :

T. W. G. HOGG, M.B., B.Ch. (part-time), School Medical Services.
 (Ophthalmic Specialist).
 I. A. DAVISON, B.A., M.D., D.P.H. (part-time), School Medical Services.
 (Ophthalmic Specialist).
 WM. S. GIBSON, M.B., B.Ch. (Hons.), (part-time), School Medical Services.
 (Aurist Specialist).

Dentists :

VIOLET M. E. GUY, M.B., B.Ch., B.D.S. (part-time), School Medical Services.		
C. H. MATTHEWS, L.D.S.	do.	do.
A. S. IRVINE, L.D.S.	do.	do.
T. J. GILMORE, L.D.S.	do.	do.
O. BLACK, L.D.S.	do.	Tuberculosis Department.

Health Visitors and Nurses :

1 Superintendent of Midwives.
 11 Health Visitors.

Purdysburn Fever Hospital :

Matron—Miss P. E. SWARBRICK.
 Asst. Matron—Miss M. WARD.
 9 Ward Sisters.
 42 Nurses.

Whiteabbey Sanatorium :

Matron—Miss E. WOODS, S.R.N.
 5 Sisters.
 5 Staff Nurses.
 20 Probationers.

Municipal Hospital for Tuberculous Children, Graymount :

Matron—Miss A. E. LYNESS, S.R.N.
 1 Sister.
 3 Staff Nurses (temporary).
 6 Probationers.

Sanitary Staff :

- Divisional Inspector, W. J. SEFTON—South Division.
do. do. J. B. BOYD—North Division.
do. do. S. DENNISON—West Division.
do. do. W. J. DAVISON—East Division.
- 14 District Sanitary Sub-Officers.
3 Sanitary Sub-Officers—Factory and Workshops—1 Male and 2 Female.
2 Dairies, Cowsheds and Milkshops Inspectors (one of whom is employed part-time under Diseases of Animals Acts).
4 Sale of Food and Drugs Acts Inspectors.
6 Meat Inspectors.
1 Port Sanitary Officer.
1 Lodging House Inspector.
1 Inspector i/c. Disinfectors.
4 Assistant Disinfectors.
1 Manager, Disinfecting Station.
2 Assistant Disinfectors, Disinfecting Station.
1 Assistant (Female), at Disinfecting Station.
1 Motor Driver, at Disinfecting Station.
3 Assistant Drain Testers.
1 Storeman.
1 Time and Complaints Clerk.
1 Notice Server.

District Medical Officers of Health (part-time) who are the Dispensary Medical Officers under the Poor Law :

No.	1	Dispensary District—	Dr. H. A. SKILLEN.
	2	do.	do. Dr. D. KINLEY.
	3	do.	do. Dr. H. D. OSBORNE.
	4	do.	do. Dr. W. BURNS.
	5	do.	do. Dr. R. HALL.
	6	do.	do. Dr. G. SCARLETT.
	7	do.	do. Dr. D. WILSON.
	8	do.	do. Dr. C. J. MILLIGAN.
	9	do.	do. Dr. J. KENNEDY.
	10	do.	do. Dr. J. FULTON.
	11	do.	do. Dr. R. J. MUNN.
	12	do.	do. Dr. J. D. HAMILTON.
	13	do.	do. Dr. H. R. IRVINE.
	14	do.	do. Dr. W. D. DONNAN.
	15	do.	do. Dr. T. J. KERR.
	16	do.	do. Dr. T. E. HILL.

PROFESSIONAL NURSING IN THE HOME.

“The Society for Providing Nurses for the Sick Poor, Belfast,” employs a staff of eleven nurses for district work. The nurses visit the poor in their own homes and in cases of illness apply such ministrations and assistance as may be required. Members of the medical profession as well as the clergy of all denominations are invited to bring deserving cases under the notice of the District Matron, but no case can be regularly attended by a nurse unless seen by a doctor.

The Society is dependent upon voluntary subscriptions and gifts in kind to enable it to carry on the magnificent work of alleviating human suffering and caring for the sick poor.

The Corporation has no working arrangement with the Society, but any cases referred by the Medical Officers of the Public Health services have always received the willing attention of the district nurses.

The district nurses do not attend infectious cases. It is hoped that in the near future the Corporation will come to an arrangement for the home nursing of cases of Measles, Whooping Cough, etc., by the district nurses. Such an arrangement would relieve hospital strain during an epidemic and would also tend to lessen the mortality rate of these diseases.

MIDWIVES.

The Corporation does not employ or pay a subsidy to practising midwives in the city. The Poor Law Guardians employ 15 Dispensary Midwives for district work. During the year the Dispensary Midwives attended 863 confinements in their dispensary districts. In order to assist practising midwives, the Corporation, under certain circumstances, pay the fees of any doctors who may be called in emergency cases by the midwives.

During the year the services of medical practitioners were requisitioned by midwives in 472 emergency cases. The Corporation paid in fees £133 7s. 0d. to medical practitioners for their attendances at emergency cases.

During the year 226 midwives gave the required notice of their intention to practise, of these 206 were certified by examination and 20 otherwise certified.

In order to ensure compliance with the Rules and Regulations of the Joint Nursing and Midwives' Council, the midwives were visited at intervals throughout the year by the Superintendent of Midwives, both at their homes and also at the homes of cases being attended by them. Special attention was given to the personal cleanliness of the midwives and the condition of their homes and the necessary appliances. The registers containing the entries of births attended by them were examined, and were, with very few exceptions, found to be correctly kept.

A number of breaches of the Rules and Regulations were discovered and reported to the Maternity and Child Welfare Committee.

113 cases of Ophthalmia Neonatorum occurred during the year. All of these completely recovered.

93 cases of Inflammation of Eyes occurred during the year.

75 cases of Puerperal Pyrexia occurred during the year, of these 4 died.

In cases where artificial feeding was resorted to, instructions as to the absolute necessity of cleanliness of the bottles and teats were given. Mothers were also advised to take advantage of the Child Welfare Centres, the benefits both to themselves and their infants being explained to them.

SUMMARY.

Number of Midwives who notified their intention to practise :—

Certified by examinations	..	..	..	206
Otherwise certified	..	..	..	20
				<hr/> 226

SUMMARY OF VISITS AND GENERAL INFORMATION WITH RESPECT TO THE ENFORCEMENT OF THE PROVISIONS OF THE ACT AND RULES AND REGULATIONS MADE PURSUANT THERETO.

Visits by Superintending Midwife :—

To Midwives certified by examination	..	..	410	
To Midwives otherwise certified	..	..	97	
Total Visits to Midwives	..	..	<hr/>	507
To cases attended by Midwives	..	..	400	
To Maternity Nursing Homes	..	..	39	
To unregistered women found practising	..	..	9	

Births :—

Attended by Medical Practitioners	3,217
„ by Midwives certified by examination	3,978
„ by Midwives otherwise certified	321
„ in Union Maternity Hospital	826
„ in other Maternity Hospitals	723
„ by Nurses from Maternity Hospitals	378
„ in Malone Place Home	112
„ in Thorndale Home	69
„ in Nursing Homes	421

Notifications received by Medical Superintendent Officer of Health :—

Under Form A.—Sending for Medical help	472
„ „ B.—Notification of Death	14
„ „ C.—Notification of Still birth	449
„ „ D.—Notification of having laid out a Dead Body	5
„ „ E.—Source of Infection	6
„ „ F.—Artificial Feeding	82

Irregularities :—

Number of Midwives reported to Medical Superintendent Officer of Health or Maternity and Child Welfare Committee	15
Practising without being registered	9
Number of Midwives suspended	31
„ „ prosecuted for breach of Rules	1
„ „ reported to Joint Nursing and Midwives' Council for breach of Rules	1

Number of Midwives disinfected owing to :—

Puerperal Fever	14
do. Pyrexia	26
Scarlet Fever	1
Diphtheria	1
Erysipelas	1

Number of Midwives who died	2
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NOTIFICATION OF BIRTHS ACT.

10,045 births were notified pursuant to the Notification of Births Act and in addition 135 were either discovered by Health Visitors or notified by the Registrars of Births, making a total of 10,180, of these 5,210 were males and 4,970 were females ; 449 were stillbirths and 474 were illegitimate births.

Of the total number notified 8,835 were selected for visitation and supervision, and during the year 44,386 visits were made.

On visiting a house where a birth has taken place the Health Visitor makes enquiries regarding the family history and with respect to the conditions obtaining in the home. She also makes an examination of the sanitary arrangements, and if any defect is discovered immediate remedial measures are taken.

She gives advice and instruction as to the care of infants and young children, the preparation of food and the storage of milk, butter, &c., and the precautions to be taken to prevent infectious disease.

For a period of twelve months the child is kept under special supervision and its progress recorded, and the mother is advised to attend the Child Welfare Centre in the district in which she resides. After this period there is a general supervision exercised by the Officers in the district, and if children are delicate or not thriving they are kept under supervision as long as is considered necessary.

MATERNITY AND CHILD WELFARE.

There were six Centres in operation during the year, situated at Donegall Road, Dee Street, Danube Street, York Street, Shankill Road, and Falls Road. Each Centre was open one afternoon in the week, when a Medical Practitioner, a properly trained and qualified Nurse, and a Health Visitor, together with several voluntary workers, were in attendance.

The work of the Centres consists of a thorough medical examination of babies and medical advice as to their treatment where such is required. Each baby is weighed periodically and the weight recorded in order to ascertain the progress being made and to assist in the discovery of defects or ailments at the earliest possible moment and thus prevent or check any disease which may impede its progress or have a detrimental effect upon its after life. Consultations are held with mothers with respect to their health, and they are advised and instructed in the care of infants and young children and are supplied with instructive literature on the subject. Food, such as Ostermilk, Trufood, Glaxo, etc., is supplied at cost price and free to cases where it is considered the circumstances warrant it. In addition to assisting in the regular work of the Centres, the ladies who assisted voluntarily throughout the year very kindly provided suitable clothing for babies at a nominal charge.

The following table shews the number of names on the roll of each Centre, and the total number of attendances during the year, also the number of babies medically examined and the total number of examinations :—

TABLE No. X.

Centre	On Roll	Total No. of attendances.	Babies medically examined.	Total medical examinations of babies.
Danube Street ..	810	8,411	796	2,238
Donegall Road ..	401	2,944	278	460
Dee Street ..	853	8,850	800	1,872
York Street ..	714	6,269	645	2,626
Shankill Road ..	708	9,336	911	1,717
Falls Road ..	818	6,308	509	2,264
	4,304	42,118	3,939	11,177

In 1929 the total number on the rolls was 4,141 and the total number of attendances 41,089. 3,083 babies were medically examined, the total number of such examinations being 9,554.

During the year 1930, 3,379 lbs. of Glaxo, 3,824 lbs. of Ostermilk, 1,428 lbs. of Trufood, 1,788 lbs. of Humanised Trufood, 962 lbs. of Ambrosia, 104 lbs. of Humanised Ambrosia, 577 lbs. of Dried Milk Full Cream, 75 lbs. of Colact, and 792 lbs. of Aberdeen Emulsion were distributed.

In the preceding year 4,686 lbs. of Glaxo, 1,609 lbs. of Virol, 2,003 lbs. of Ostermilk, 1,433 lbs. of Trufood, 59 lbs. of Humanised Trufood and 879 lbs. of Aberdeen Emulsion were supplied either at cost price or free to necessitous cases.

During the year 1930, 835 recipients were supplied free with 119,099 pints of sweet milk.

TABLE No. XI.

Shewing the Deaths of children under one year old per 1,000 births each year from 1881-1930.

Year.		Deaths per 1,000 Births.	Year.		Deaths per 1,000 Births.
1881	..	136	1906	..	144
1882	..	151	1907	..	136
1883	..	162	1908	..	147
1884	..	126	1909	..	139
1885	..	170	1910	..	143
1886	..	135	1911	..	128
1887	..	163	1912	..	129
1888	..	145	1913	..	144
1889	..	163	1914	..	143
1890	..	162	1915	..	137
1891	..	149	1916	..	113
1892	..	173	1917	..	130
1893	..	160	1918	..	144
1894	..	160	1919	..	113
1895	..	169	1920	..	132
1896	..	148	1921	..	115
1897	..	166	1922	..	94
1898	..	164	1923	..	101
1899	..	161	1924	..	107
1900	..	152	1925	..	104
1901	..	154	1926	..	112
1902	..	151	1927	..	101
1903	..	134	1928	..	103
1904	..	154	1929	..	112
1905	..	136	1930	..	78

NOTIFICATION OF BIRTHS ACT.

SUMMARY.

Cases investigated	8,835
„ visited a second time	7,323
„ „ third time	6,419
„ „ fourth time	5,708
„ „ fifth time	4,779
„ „ sixth time	3,731
„ „ seventh time	2,538
„ „ eighth time	1,794
„ „ ninth time	1,061
„ „ tenth time	706
„ „ eleventh time	456
„ „ twelfth time	311
„ „ thirteenth time	206
„ „ fourteenth time	140
„ „ fifteenth time	97
„ „ sixteenth time	65
„ „ seventeenth time	44
„ „ eighteenth time	37
„ „ nineteenth time	30
„ „ twentieth time	26
„ „ twenty-first time	20
„ „ twenty-second time	16
„ „ twenty-third time	10
„ „ twenty-fourth time	7
„ „ twenty-fifth time	8
„ „ over twenty-five times	19
	<hr/>
	44,386
Number of visits re Infant Mortality	484
„ visits to Child Welfare Centres	696
„ visits to sick babies	154
„ visits re Infectious Disease	705
„ visits to expectant mothers	391
„ visits to nurses	44
„ visits to handy women	2
„ miscellaneous visits	1,103
„ visits to mothers	236
„ visits to children over 1 year	3,746
„ visits to school children	4
„ visits re Tuberculosis	4
„ visits re Ophthalmia Neonatorum	397
„ unsuccessful visits	5,157
„ Nursed out babies	1,179

TABLE XII.

Deaths of Infants under One Year old from stated Causes in Weeks and Months, notified to this Department, during the 53 weeks ended 3rd January, 1931.

CAUSE OF DEATH.		Under 1 Week.		1-2 Weeks.		2-3 Weeks.		3-4 Weeks.		Total under 1 Month.		1-2 Months.		2-3 Months.		3-4 Months.		4-5 Months.		5-6 Months.		6-7 Months.		7-8 Months.		8-9 Months.		9-10 Months.		10-11 Months.		11-12 Months.		Total Deaths under One Year.		GRAND TOTAL.
ALL CAUSES.		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Common Infectious Diseases	Small-pox
	Chicken-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Measles	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Scarlet Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrheal Diseases	Diphtheria : Croup	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Influenza	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Whooping Cough	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Diarrhoea, all forms	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wasting Diseases	Enteritis (<i>not Tuberculous</i>)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Gastritis, Gastro-intestinal Catarrh	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Premature Birth	67	38	10	5	6	2	4	..	87	45	3	3	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Spina Bifida	4	1	1	3	1	..	..	..	6	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculous Diseases	Other Congenital Defects	6	8	3	1	2	1	..	..	11	10	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Injury at Birth	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Want of Breast-milk	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Atrophy, Debility, Marasmus	25	29	10	4	4	6	4	4	43	43	11	10	6	10	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculous Diseases	Tuberculous Meningitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Tuberculous Peritonitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Tabes Mesenterica	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Other Tuberculous Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculous Diseases	Erysipelas	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Syphilis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Rickets	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Meningitis (<i>not Tuberculous</i>)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculous Diseases	do. Cerebro-Spinal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Convulsions	5	1	1	1	3	2	..	..	9	4	4	..	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Bronchitis	..	..	..	..	..	..	..	..	5	1	2	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Laryngitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculous Diseases	Pneumonia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Suffocation, overlaying	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Other Causes	15	21	..	..	..	..	..	..	18	23	1	1	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Total	122	98	28	17	23	13	16	10	189	138	35	28	43	21	36	25	19	15	25	14	17	9	15	8	20	11	12	12	10	14	12	16	433	311	744

LEGISLATION IN FORCE.

Public Health (Ireland) Acts, 1878 to 1907.

Housing of Working Classes Acts.

BELFAST CORPORATION LOCAL ACTS.

8- 9 Vic., Cap.	cxlii (1845).
9-10 Vic., Cap.	ccvcix (1846).
10-11 Vic., Cap.	ccliv (1847).
13-14 Vic., Cap.	cviii (1850).
16-17 Vic., Cap.	cxiv (1853).
27-28 Vic., Cap.	cxcviii (1864).
28-29 Vic., Cap.	clxxxiii (1865).
29-30 Vic., Cap.	cxiii (1866).
31-32 Vic., Cap.	cxvii (1868).
36-37 Vic., Cap.	cxcix (1873).
37-38 Vic., Cap.	cxxv (1874).
40-41 Vic., Cap.	cxxii (1877).
41-42 Vic., Cap.	clxxx (1878).
47-48 Vic., Cap.	xciii (1884).
50 Vic., Cap.	xxiii (1887).
50-51 Vic., Cap.	cxxvii (1887).
52-53 Vic., Cap.	xlii (1889).
53-54 Vic., Cap.	cv (1890).
53-54 Vic., Cap.	cxcii (1890).
54-55 Vic., Cap.	lvii (1891).
55-56 Vic., Cap.	ccx (1892).
55-56 Vic., Cap.	ccxxxi (1892).
59-60 Vic., Cap.	ccxlv (1896).
60-61 Vic., Cap.	lxxxvi (1897).
61-62 Vic., Cap.	xliv (1898).
61-62 Vic., Cap.	liii (1898).
62-63 Vic., Cap.	ccxlv (1899).
2 Ed. VII., Cap.	cix (1902).
4 Ed. VII., Cap.	ccxxix (1904).
8 Ed. VII., Cap.	cxxvi (1908).
10 Ed. VII., & 1 Geo. V. Cap.	xl (1910).
1 & 2 Geo. V., Cap.	cxc (1911).
2 & 3 Geo. V., Cap.	ix (1912).
3 & 4 Geo. V., Cap.	c (1913).
4 & 5 Geo., V., Cap.	xxxviii (1914).
13 & 14 Geo. V., Cap.	v (1923).
14 & 15 Geo. V., Cap.	iv (1924).
15 & 16 Geo. V., Cap.	iii (1925).

Port Sanitary Authority Local Government Board (Ireland) Provisional Orders Confirmation (No. 4) Act, 1900 ; 63 & 64 Vic., Cap. ccv.

The Belfast Holywood and Castlereagh Joint Board, L.G.B. (Ireland) Provisional Orders Confirmation (No. 2) Act, 1905, 5 Edw. VII., Cap. cxxiii.

PUBLIC ACTS ADOPTED BY THE COUNCIL.

ACT.	DATE OF ADOPTION.
Baths and Washhouses Act, 1846	1st February, 1854.
Public Libraries (Ireland) Act, 1855	1st December, 1882 (By Plebiscite).
Public Health Acts Amendment Act, 1890 (Part III.) ..	1st January, 1891.
Infectious Disease (Prevention) Act, 1890	5th March, 1891.
Infectious Disease (Notification) Act, 1889	1st January, 1897.
Housing of the Working Classes Act, 1890 (Part 3) ..	1st November, 1897.
Notification of Births Act, 1907	2nd December, 1907.
Public Health Acts Amendment Act, 1907 (Parts 7, 8 and 9) ..	By Order of Chief Secretary for Ireland, dated 9th May, 1908.
Public Health Acts Amendment Act, 1890 (Part 4) ..	{ 1st April, 1908. 1st May, 1908.
Museums and Gymnasiums Act, 1891 (So much as relates to Museums)	1st February, 1909.
Tuberculosis Prevention (Ireland) Act, 1908 (Part 1) ..	1st September, 1908.
Public Health Acts Amendment Act, 1907 (Parts 2, 3, 4, 5, 6, and 10)	By Order of L.G.B. for Ireland, dated 20th July, 1910.

BYE-LAWS AND REGULATIONS.

NATURE OF BYE-LAWS.	WHEN MADE.	WHEN CONFIRMED AND BY WHOM
Advertising Vans	2nd May, 1887.	Confirmation Unnecessary.
Advertising Hoardings	4th Oct., 1889.	L.G.B., 19th Oct., 1900.
Aldermen and Councillors Non-Acceptance of Office	June, 1901.	Lord Lieutenant.
Art Gallery, &c.	1st June, 1905.	L.G.B., 14th Sept., 1905.
Abattoir, Butchers working in	1st July, 1909.	L.G.B., 26th Nov., 1909. L.G.B., 4th Nov., 1913.
Abattoir, Public—		
Management and Charges	1st Sept., 1913.	L.G.B., 4th Nov., 1913.
do.	3rd April, 1922.	Ministry of Home Affairs for Northern Ireland, 20th May, 1922.
do.	3rd Jan., 1927.	10th March, 1927.
do.	1st April, 1927.	13th May, 1927.
Baths and Wash-houses	5th April, 1904.	L.G.B., 16th May, 1904.
Buildings—New	1st Feb., 1890.	L.G.B., 30th April, 1890.
Buildings	1st Nov., 1928.	Ministry of Home Affairs for Northern Ireland, 12th Dec., 1928.
Bicycles, etc.	1st Jan., 1898.	L.G.B., 13th Mar., 1898.
Betting in Streets	3rd Feb., 1902.	L. Lieut., 14th Mar., 1902.
Bowling Greens	1st July, 1926.	Ministry of Home Affairs, 23rd August, 1926.
do.	2nd May, 1927.	2nd July, 1927.
Burial Grounds	3rd Jan., 1921. Amended 1st Feb., 1927.	L.G.B., 17th Jan., 1921.
Cattle Drivers	1st July, 1925.	Ministry of Home Affairs for Northern Ireland, 1st Sept., 1925.
Coal, Sale of	1st Aug., 1919.	Board of Trade, 15th Sept., 1919.
Children—Prevention of Cruelty to	1st Aug., 1893.	L. Lieut., 6th October, 1893.
Children's Playgrounds	1st Nov., 1923.	Ministry of Home Affairs, 21st Dec., 1923.
Place of Safety, Nazareth House	1st June, 1906.	
Carriage Traffic—		
At Opera House	1st Jan., 1896.	
At Ulster Hall	1st Dec., 1894.	
At Rugby Football Grounds—		
Ravenhill Road	25th Jan., 1928.	
Carrick House	16th May, 1902.	L.G.B., 26th July, 1902.

NATURE OF BYE-LAWS.			WHEN MADE.	WHEN CONFIRMED AND BY WHOM.
Conveyances Plying for Public Hire—				
Hackney Carriages	..	..	2nd Dec., 1867. and subsequent dates.	Chairman, Quarter Sessions., Jan., 1868, and subsequent dates.
do.	..	..	1st April, 1898.	Chairman of Quarter Sessions, 14th Oct., 1898.
do.	..	..	1st Sept., 1910.	Recorder of Belfast, 4th Nov., 1910.
do.	..	..	2nd April, 1918.	Recorder of Belfast 18th June, 1918.
do.	..	..	1st June, 1920.	18th Sept., 1920.
Motor Taxi Cab (Fares)		..	1st May, 1923.	Chairman of Quarter Sessions, 19th July, 1923.
do.	do.	..	1st March, 1928.	Ministry of Home Affairs, 16th June, 1928.
Public Service Omnibuses	..	..	27th June, 1928.	

NOTE.—Under the provisions of the Motor Vehicles (Traffic and Regulation) Act (N.I.), 1926, the licensing of mechanically propelled Public Service Vehicles to ply for hire is, since the 1st July, 1927, done by the Minister of Home Affairs.

Dogs, Wearing of Collars by	..	..	1st May, 1907.	
Dairies, Cowsheds and Milkshops	..	..	1st Sept., 1908.	Confirmation Unnecessary.
Drovers of Cattle (see Cattle Drovers).				
Female Domestic Servant's Registries			1st March, 1911.	Chief Secretary for Ireland, 27th April, 1911.
Factory and Workshop	..	..	20th June, 1916.	L.G.B., 2nd Aug., 1916.
Hoarding (Advertising)	..	..	4th Oct., 1899.	do. 19th Oct., 1900.
House Refuse, Removal of	..	..	1st Feb., 1909.	do. 8th April, 1909.
Ice Cream, Manufacture and Sale of			1st Feb., 1927.	Ministry of Home Affairs, 31st March, 1927.

Juvenile Street Trading (see Street Trading)

Lodging Houses—

Other than Common	..	..	1st May, 1876.	L.G.B., 7th June, 1876.
Seamen's	..	..	March, 1883.	Board of Trade, 17th March, 1883.
Common	..	..	2nd Nov., 1903.	L.G.B., 20th Jan., 1904.
Lights on Vehicles	..	..	1st Jan., 1901.	do. 18th April, 1901.
Lord Mayor, non-acceptance of Office	..	..	June, 1901.	L. Lieutenant, 8th February, 1902
Locomotives—				
(Streets)	..	..	5th June, 1906.	L.G.B., 19th July, 1906.
(Hours)	..	..	1st May, 1914.	do. 15th June, 1914.
Markets	..	..	1st Feb., 1851.	Chairman Quarter Sessions, 12th April, 1851.
Grain and Meal Market	..	..	1st Sept., 1896.	do. 27th Oct., 1896.
Mortuary	..	..	1st Dec., 1895.	
Motor (Taxi) Cabs Plying for Hire (see Conveyances Plying for Hire).				
Meat, Conveyance of	..	..	1st May, 1922.	Ministry of Home Affairs, 7th June 1922.
Meat, Inspection of	..	..	1st Dec., 1913.	13th Feb., 1914.
Offensive Trades	..	..	2nd Nov., 1903.	20th Jan., 1904.
do.	..	..	2nd Nov., 1914.	11th Dec., 1914.
Public Parks General	..	..	1st Aug., 1923.	do. 27th Sept., 1923.
do.	..	..	2nd May, 1927.	do. 2nd July, 1927.
Public Parks	..	..	1st Nov., 1928.	do. 18th Dec., 1928.
Bellevue Gardens and Hazelwood	..	..	1st Aug., 1923.	Ministry of Home Affairs (N.I.), 27th Sept., 1923.
do.		..	2nd May, 1927.	do. 5th Aug., 1927.
Children's Playgrounds	..	..	1st Nov., 1923.	Ministry of Home Affairs, 21st, Dec., 1923.
Regulation of Vehicular Traffic,				
Ormeau Park	..	..	2nd Oct., 1922.	Ministry of Home Affairs (N.I.) 4th Dec., 1922.

NATURE OF BYE-LAWS.			WHEN MADE.	WHEN CONFIRMED AND BY WHOM.
Piggeries .. ..	..	..	1st May, 1894.	L.G.B., 2nd Aug., 1894.
Public Libraries, Art Gallery and Museum .. ..	..	..	1st June, 1905.	do. Aug., 1905.
Public Sanitary Conveniences ..	..	..	2nd Nov., 1908.	do. 2nd Jan., 1909.
Places of Public Resort—Regulations re Ingress to and Egress from .. ..	..	..	1st Nov., 1909. Amended 3rd Nov., 1913.	Confirmation Unnecessary.
School Attendance .. ..	..	..	2nd June, 1924.	Ministry of Education, 18th Aug., 1924.
School Committee, Scheme regulating the Constitution, Powers, Duties and Procedure .. ..	..	..	2nd Jan., 1928.	
Spitting .. ..	..	..	4th Aug., 1903.	L. Lieut., 1st September, 1903.
Street Nuisances .. ..	..	..	6th Nov., 1903.	L. Lieut., 12th Oct., 1905.
Street Traffic .. ..	..	..	1st June, 1904. 1st Feb., 1906. 1st Oct., 1917. 3rd Oct., 1927. 3rd Dec., 1928.	Confirmation Unnecessary.
Street Trading (Juvenile) .. ..	..	..	1st Oct., 1925.	Ministry of Home Affairs, 16th December, 1925.
Standing Orders of Council ..	..	..	2nd April, 1918, and revised subsequent dates.	
Sheep Scab .. ..	..	..	1st April, 1915.	
Sanitary Conveniences (see Public Sanitary Conveniences.)				
Swimming Ponds—				
Regulations for use of .. ..	..	..	1st April, 1910.	
Lawn Tennis Courts .. ..	..	..	2rd Jan., 1922.	Lord Lieutenant, 9th January, 1922.
Tents, Vans, etc. .. ..	..	..	1st July, 1919.	
Tramways .. ..	..	..	2nd Oct., 1905.	Commissioner of Public Works, 2nd December, 1905.
Vehicles, Lights on .. ..	..	..	1st Jan., 1901.	L.G.B., 18th April, 1901.

PREMISES AND OCCUPATIONS WHICH CAN BE CONTROLLED BY
BYELAWS AND REGULATIONS ADMINISTERED BY PUBLIC
HEALTH DEPARTMENT.

NATURE OF BYELAW.	NUMBER OF PREMISES	CHARACTER OF PREMISES.
Abattoir— Butchers working in	1 —	City Abattoir. —
Abattoir— Management and Charges	—	—
Burial Grounds	12 { 3 controlled by Corporation. 9 Private Burial Grounds.	<p>The Burial Grounds under the control of the Corporation are City Cemetery, Dundonald Cemetery and Knock Cemetery.</p> <p>The City Cemetery is situated about $2\frac{1}{2}$ miles from the centre of the City on the West side of Falls Road. It contains about 45 acres and was opened in the year 1869.</p> <p>Dundonald Cemetery is situated in the parish of Dundonald, about 4 miles distant from the centre of the City. It also contains about 45 acres and was opened in the year 1905.</p> <p>Knock Cemetery is situated on the Knock Road.</p> <p>The private burial grounds are :— Friars' Bush Cemetery, Stranmillis Road. Milltown R.C. Cemetery, Falls Road. Malone Burial Ground, Stockman's Lane. Quakers' Burial Ground, Balmoral Avenue. Old Charitable Institution Burial Ground, Clifton Street. Greencastle Burial Ground, Greencastle. Ballymacarrett Methodist Church Burial Ground, Newtownards Road. St. Matthew's Church Burial Ground, Shankill Road.</p> <p>All the graveyards are regularly inspected by the officers of the Public Health Department in order to ensure that the requirements of the Public Health Act and Byelaws made thereunder are complied with.</p>
Dairies, Cowsheds & Milkshops (Ireland) Order.	90 Cowsheds. 1,501 Milkshops.	Reports attached.

Premises and Occupations which can be Controlled by Byelaws and Regulations administered by Public Health Department—*Continued.*

NATURE OF BYELAW.	NUMBER OF PREMISES	CHARACTER OF PREMISES.
Ice Cream— Manufacture and Sale of	1,112	Grocery Shops ; Confectionery Shops ; Fish and Chip Shops ; Kitchen Houses, &c., &c.
Lodging Houses— Common	49	The Common Lodging Houses are old type of houses, situated principally in the centre of the City, with accommodation for lodgers varying from 5 to 319. They consist of :— One—1-storey house ; Eleven—2 stories ; One—2 stories and attics ; Fourteen—3 stories ; Fifteen—3 stories and attics ; Five—4 stories ; One—basement and 2 stories ; One—basement and 3 stories.
Other than Common	736	Detailed report attached.
Seamen's	None registered.	—
Meat— Conveyance of	—	—
Inspection of	—	—
Offensive Trades	21	Hide Stores 2 ; Gut Scrapers 2 ; Bone Boilers 5 ; Soap Manufacturers 6 ; Fellmongers 3 ; Fat Boilers 1 ; Fat Extractors 1 ; Tanners 1.
Piggeries	—	—
Sheep Scab	—	—
Tents, Vans, &c.	—	—
Rag Flock Act, 1911, Regulations	No rag flock manufactured in Belfast, but flock is sold in approximately 20 premises.	Bedding manufacturers and Upholsterers. During the year 7 samples of flock were taken and submitted to Public Analyst and found on examination to be up to standard.

FACTORY AND WORKSHOP ACTS.

Summary of inspections and of sanitary improvements carried out in pursuance of the provisions of above Acts.

FATORIES.

728 visits were made to factories.

166 nuisances were discovered.

21 complaints were received from H.M. Inspector of Factories.

15 complaints were received from other sources.

69 Statutory notices for sanitary defects were served.

29 Verbal notices for sanitary defects were given.

SANITARY IMPROVEMENTS.

No. of Factories in which improvements were carried out.	Nature of improvements.
9 ..	Water closet accommodation provided.
2 ..	Separate sanitary accommodation provided for each sex.
2 ..	Water closet apartments repaired.
3 ..	Water closets cleansed.
1 ..	Water closets repaired.
30 ..	Water closets cleansed and repaired.
1 ..	Walls of water closet apartments lime washed.
4 ..	Doors with suitable fastenings provided to water closets.
1 ..	Water closets provided with means of ventilation.
21 ..	Intervening ventilated spaces provided between workrooms and water closets.
5 ..	Means of ventilation provided.
1 ..	Soil pipe repaired.
3 ..	Tiles relaid or floors repaired.
2 ..	Means of heating provided.
1 ..	Hood and flue provided to carry off gas fumes.
3 ..	Factories cleansed.
2 ..	Urinals provided with flushing arrangements.
2 ..	New drains provided.
2 ..	Drains cleansed.
1 ..	Opening into drain within factory where food is stored, closed up.
2 ..	Waste pipes repaired.
8 ..	Roofs and spoutings repaired.
2 ..	Stairs cleansed.
1 ..	Walls repaired.
1 ..	Gas engine provided with silencer.
3 ..	Water supply provided.
1 ..	Smoke nuisance abated.
1 ..	Offensive pit abolished.
1 ..	Premises closed on sanitary grounds as unfit for use as a factory.
1 ..	Nuisance caused by discharge of dust abated.
12 ..	Trade refuse removed.

WORKSHOPS.

2,473 workshops on register on 1st January.

128 registered during the year.

87 removed from register during the year.

2,482 visits made.

358 nuisances discovered.

177 Statutory notices for sanitary defects were served.

112 verbal notices for sanitary defects were given.

14 complaints were received from M.H. Inspector of Factories.

29 Complaints were received from other sources.

7 cases of failure to exhibit abstract of Factory and Workshop Act were reported to H.M. Inspector of Factories.

SANITARY IMPROVEMENTS.

No. of Workshops in which improvements were carried out.	Nature of Improvements.
8 ..	Water closet accommodation provided.
1 ..	Insanitary water closet abolished.
2 ..	New water closet apartments erected.
4 ..	Separate water closet accommodation provided for each sex.
15 ..	Intervening ventilated spaces provided between workrooms and water closets.
5 ..	Water closets provided with means of ventilation.
3 ..	Water closet cisterns repaired.
8 ..	Water closets cleansed.
6 ..	Water closets repaired.
75 ..	Water closets cleansed and repaired.
5 ..	Water closets provided with doors fitted with fastenings.
14 ..	Water closet apartment roofs repaired.
4 ..	Waste pipes repaired.
2 ..	Means of ventilation provided.
2 ..	Means of heating provided.
3 ..	New drains provided.
2 ..	Drains cleansed.
1 ..	Yard cleansed.
3 ..	Stairs cleansed.
12 ..	Workshops cleansed.
83 ..	Workshops cleansed and limewashed.
4 ..	Workshops provided with means of ventilation.
1 ..	Walls of workshops repaired.
3 ..	Water supply provided.
4 ..	Stairs provided with handrails.
5 ..	Hoods and flues provided to gas iron heaters.
2 ..	Gas irons removed from workrooms.
10 ..	Tiles relaid or floors repaired.
2 ..	Smoke nuisances abated.
17 ..	Trade refuse removed.
1 ..	Manure removed.
3 ..	Receptacles for ashes provided.
2 ..	Roofs repaired.
22 ..	Roofs and spoutings repaired.
1 ..	Spouting cleansed and repaired.
7 ..	Premises closed on sanitary grounds as unfit to be used as a workshop.

WORKPLACES.

289 visits were made to workplaces.

50 nuisances were discovered.

36 Statutory notices were served.

33 Verbal notices given.

6 complaints were received.

SANITARY IMPROVEMENTS.

No. of Workplaces in which improvements were carried out	Nature of Improvements
5 ..	Separate water closet accommodation provided for each sex.
2 ..	Water closet accommodation provided.
7 ..	Water closets cleansed.
4 ..	Water closets cleansed and repaired.
4 ..	Intervening ventilated space provided between workplace and water closets.
3 ..	New drains provided.
1 ..	Drains cleansed.
1 ..	Means of ventilation provided to water closets.
2 ..	Cisterns repaired.

No. of Workplaces in which improvements were carried out.	Nature of Improvements.
9 ..	Workplaces cleansed.
1 ..	Workplace provided with means of ventilation.
1 ..	Tiles relaid.
1 ..	Roof repaired.
2 ..	Roofs and spoutings repaired.
2 ..	Spoutings repaired.
4 ..	Water supply provided.
2 ..	Stairs cleansed.
1 ..	Accumulations of manure removed.
3 ..	Accumulations of trade refuse removed.
2 ..	Smoke nuisances abated.
2 ..	New sinks provided.
1 ..	Proper storage provided for food.
1 ..	Restaurant kitchen ceased to communicate with bedroom.

BAKEHOUSES.

721 visits were made to bakehouses.

197 nuisances were discovered.

3 cases of failure to exhibit abstract of Factory and Workshop Act
were reported to H.M. Inspector of Factories.

50 Statutory notices were served.

29 Verbal notices.

4 Complaints were received.

SANITARY IMPROVEMENTS.

No. of Bakehouses in which improvements were carried out.	Nature of Improvements.
2 ..	Water closets cleansed.
3 ..	Water closets cleansed and repaired.
3 ..	Intervening ventilated space provided between bakehouses and water closets.
1 ..	Water closet accommodation provided.
1 ..	Additional water closet accommodation provided.
10 ..	Means of ventilation provided.
2 ..	Openings into drains within bakehouses closed up.
1 ..	Drain cleansed.
12 ..	Hoods and flues provided to carry off fumes from hot plates and ovens.
1 ..	Handrail provided to stairs.
2 ..	Walls and ceilings repaired.
7 ..	Roofs and spoutings repaired.
1 ..	Roof and walls of water closet apartment repaired.
2 ..	Floors repaired.
5 ..	Tiles relaid.
2 ..	New sinks provided.
1 ..	Soil pipe repaired.
38 ..	Bakehouses cleansed and limewashed.
1 ..	Smoke nuisance abated.
3 ..	Premises closed as unfit to be used as a bakehouse.
4 ..	Accumulations of trade refuse removed.
1 ..	Accumulation of manure removed.

All bakehouses were limewashed or otherwise cleansed at least twice during the year.

TABLE XIII.

HOME WORK.

	OUTWORKERS														
	Lists received from Employers								Prosecutions	Inspections of Outworkers' Premises	Outwork in Unwholesome Premises		Outwork in Infected Premises		Visits to Employers Premises
	Sending Twice in the Year				Sending Once in the Year						Instances	Notices Served	Instances	Orders Made	
	Lists	Outworkers		Lists	Outworkers										
		Contractors	Workmen		Contractors	Workmen									
Wearing Apparel— Making, Cleansing and Washing ..	161	2	632		13	..	28	..	1,577	..	..	..	..
Household Linen ..	145	365	3,886		6	1	48	..	3,539	217	6	6	146		
Furniture and Upholstery	2	..	2		..	..	..	..	2	..	..	..	..
Paper Bags ..	4	..	8		..	..	..	..	11	..	..	..	..
Total ..	312	367	4,528		19	1	76	..	5,129	217	6	6	146		

The approximate number of outworkers over which the department required to exercise supervision during the year was 1,000.

The names and addresses of all outworkers and contractors who resided outside the city were forwarded to the District Council of the District in which they resided.

64 sanitary defects, nuisances, etc., were discovered and remedied.

All work found on infected premises was disinfected.

COMMON LODGING HOUSES.

Number on Register at 1st January	..	..	..	49
Number of lodgers for whom there was accommodation	..			1,379
Number of visits during the year by lodging-house Inspector	..			3,293
Statutory notices served for nuisances	..	..	..	78
Verbal notices for breaches of Byelaws	..	..	..	291

The accommodation varies from 5 to 319 persons to a house.

Two applications for registration were refused as the premises were unsuitable.

On visiting the lodging houses your officer paid special attention to the general condition of the premises, including cleanliness, lighting and ventilation, and also to the condition of the bedding. The prevention of overcrowding was strictly enforced.

All the houses were limewashed regularly and the bedding cleansed or renewed at intervals.

No case of infectious disease occurred in any of the houses during the year.

A number of sanitary defects were discovered for which notices were served on the owners or persons responsible.

SANITARY IMPROVEMENTS.

No. of Lodging Houses in which improvements were carried out.	Nature of Improvements.
7 ..	Drains cleansed.
19 ..	Roofs repaired.
6 ..	Spouting repaired.
3 ..	Spouting cleansed.
6 ..	Water closets cleansed.
3 ..	Water closets repaired.
1 ..	Burst pipe repaired.
3 ..	Tiles relaid.
1 ..	Concreting repaired.
1 ..	Waste pipe provided to sink.
2 ..	Door frames repaired.
4 ..	Window frames repaired.
2 ..	Walls repaired.
3 ..	Plaster repaired.
2 ..	Chimney flues repaired.
1 ..	Rubbish removed.
3 ..	Dust bins provided.

RAG FLOCK ACT, 1911.

During the year 1930, 50 visits were made to premises where rag flock was used for making bedding and upholstery. Seven samples were taken for analysis and found to be up to standard.

SMOKE NUISANCE.

During the year 514 observations were made for the detection of black smoke being emitted in such quantities as to be a nuisance.

OFFENSIVE TRADES.

During the year 461 visits were made to the premises in which offensive trades were carried on throughout the City, in order to ensure that the Bye-Laws with respect to same were being complied with.

TABLE No. XIV.
LEGAL PROCEEDINGS.

	Summonses.	Orders.	Fines.		
			£	s.	d.
Under Public Health Acts—					
For abatement of nuisances	790	146	18	5	0
Disobedience of Justices' Orders ..	23	—	23	7	5
Building not provided with a proper sink for carrying off refuse water.	3	—	3	0	0
Conveying the unsound carcase of a pig for sale.	2	—	7	10	0
Conveying the unsound carcase of a calf for sale.	1	—	5	0	0
Depositing the unsound carcase of a lamb for sale	1	—	5	0	0
Exposing unsound meat for sale ..	2	—	2	0	0
Nuisance arising from offensive trade ..	1	—	—		
Under Dairies, Cowsheds and Milkshops Order	3	—	3	10	0
Under Bye-Laws for the Regulation of Piggeries.	1	—	0	5	0
Under Belfast Corporation Acts	12	—	7	0	0
Under Bye-Laws for the decent and seemly conveyance of meat through the public thoroughfares	18	—	18	10	0
Under Merchandise Marks Orders ..	39	—	22	5	0
Under Bye-Laws with respect to Common Lodging-Houses	2	—	1	0	0
Under Bye-Laws with respect to the management of Public Abattoir	1	—	1	0	0
Under Bye-Laws prohibiting the sale of meat until after inspection	3	—	2	5	0
Under Bye-Laws for the Regulation of Offensive Trades	2	—	2	0	0
Under Housing of the Working Classes Acts ..	2	—	0	1	0
Under Diseases of Animals Acts—					
Sheep Scab and Sheep Dipping Orders ..	10	—	12	5	0
Bovine Tuberculosis Order ..	4	—	16	0	0
Under Sale of Food and Drugs Acts ..	—	—	129	5	0

RAINFALL.

The following Table, kindly supplied by Mr. W. I. Quinn, Secretary to the Belfast City and District Water Commissioners, shows the rainfall in inches during the several months of the year 1930 as recorded at the Water Works at Old Park, compared with the preceding ten years.

TABLE No. XV.

		1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930
January	..	4.78	5.42	4.62	4.84	5.06	3.16	5.09	3.57	7.63	2.29	4.80
February	..	1.83	0.57	3.84	6.39	0.85	4.15	4.80	1.75	4.61	4.23	0.90
March	..	2.72	2.24	1.28	2.53	1.36	1.24	1.52	2.65	3.79	0.57	2.03
April	..	2.50	0.89	3.62	3.28	3.15	3.89	1.93	1.26	1.40	1.28	2.01
May	..	3.40	1.52	1.67	1.43	5.12	6.23	2.30	1.43	1.65	2.93	2.02
June	..	2.96	0.21	2.18	0.49	4.32	0.41	1.97	3.91	4.83	3.12	2.35
July	..	2.37	3.22	3.52	1.60	4.42	3.96	3.74	2.93	2.35	3.51	3.34
August	..	2.17	3.18	3.63	7.40	5.71	1.70	3.67	3.10	3.82	5.67	6.41
September	..	2.36	1.71	1.98	4.34	6.93	3.96	2.23	5.42	2.13	0.83	4.51
October	..	6.57	4.21	1.82	5.80	3.00	3.47	3.85	3.66	7.38	4.33	6.03
November	..	3.26	2.97	1.39	4.20	4.17	1.86	4.18	4.84	5.61	5.10	5.39
December	..	5.67	3.73	2.86	5.78	4.83	4.68	1.05	2.91	4.55	7.67	4.24
Total	..	40.59	29.87	32.41	48.08	48.92	38.71	36.33	37.43	49.75	41.53	44.03

MEAT INSPECTION.

The following is a summary of the work carried out under the Supervision of the City Veterinarian (Capt. John McClure Barry, M.R.C.V.S.).

Table showing the number and kind of animals slaughtered and inspected in the Municipal Abattoir during the year 1st January—31st December, 1930, also the number of carcasses condemned (from all causes) as being unfit for human consumption.

(The figures for the preceding year are given for comparison).

TABLE (1).

Species	Number Slaughtered		Number Condemned	
	1930	1929.	1930.	1929.
COWS	23,734	25,882	637	687
HEIFERS	1,502	1,598	15	14
BULLS	759	762	3	4
BULLOCKS	16,474	16,918	46	48
CALVES	1,391	2,606	33	41
SHEEP AND LAMBS ..	85,314	83,212	216	150
GOATS	1,083	1,406	59	29
PIGS	9,384	11,305	92	76

TABLE (2).

Return showing the Carcasses seized in the Municipal Abattoir during the year and totally destroyed as being unfit for food.

	Cows	Heifers	Bulls	Bullocks	Calves	Sheep	Lambs	Goats	Pigs.
Actinomycosis .. ..	..	..	..	1	..	..	..	..	..
Asphyxiated .. ..	..	..	..	..	1	..	..	..	..
Cancer	56	1	..	..	..	3	..	..	..
Decomposed	2	..	2	3	1	22	..	1	5
Dropsical	31	..	..	1	3	155	..	56	8
Emaciated	40	..	..	2	1	3	..	..	..
Fevered	51	1	..	1	7	12	..	1	27
Gangerine	2	..	..	..	..	..	..	..	..
Hydatid .. ..	..	..	..	1	..	1	..	..	..
Inflammation	1	..	..	..	2	..	..	..	..
Injured	6	..	..	1	1	8	..	..	1
Jaundice	1	..	..	..	2	..	..	..	3
Joint- Ill .. ..	..	..	..	..	5	..	..	..	..
Melanosis .. ..	..	..	..	2	..	..	..	..	..
Peritonitis .. ..	..	..	..	..	..	3	..	..	..
Premature .. ..	..	..	..	..	2	..	..	..	..
Pyaemia	2	..	..	..	1	..	..	..	..
Septicaemia	25	2	..	6	1	6	..	..	4
Septic Pericarditis ..	1	..	..	..	1	1	..	..	..
Septic Pneumonia ..	3	1	..	..	1	2	..	1	1
Swine Fever .. ..	..	..	..	..	..	..	..	..	21
Tuberculosis	416	10	1	28	2	..	..	..	20
White Scour .. ..	..	..	..	..	2	..	..	..	..

TABLE (3).

Showing Comparison between Tuberculosis and Other Diseases as causes of condemnation of carcasses of animals slaughtered in the Municipal Abattoir during the year.

		CATTLE			Sheep and Lambs.	Goats	Pigs	Total
		Cows	Other Cattle	Calves				
Total	..	416	39	2	..	..	20	477
Tuberculosis								
Partial	..	14	5	..	..	..	..	19
Total	..	430	44	2	..	..	20	496
Total	..	221	25	31	216	59	72	624
Other Diseases	..							
Conditions	..							
Partial	..	38	5	..	9	..	..	52
Total	..	259	30	31	225	59	72	676

TABLE (4).

The following table shows the percentage by age of the animals slaughtered and condemned for Tuberculosis.

SPECIES.		BY AGE.						
		From One Month to one Year.	Per Cent.	One to Three Years.	Per Cent.	From Three to Six Years.	Per Cent.	Over Six Years.
Cows	..	..	..	..	..	4	.96	412
Heifers	..	..	..	8	80.00	2	20.00	..
Bullocks	..	..	..	19	67.84	9	32.14	..
Bulls	..	..	..	..	..	..	..	1
Pigs	..	20	100	..	..	..	..	..
Calves	..	2	100	..	..	..	..	..

TABLE (5).

The following table shows the percentage by condition of the animals slaughtered and condemned for Tuberculosis.

SPECIES.		BY CONDITION.							
		GOOD		FAIR		INDIFFERENT		POOR	
		Number	Per Cent.	Number	Per Cent.	Number	Per Cent.	Number	Per Per
Cows	..	7	1.68	171	41.10	192	46.15	46	11.05
Heifers	..	1	10.00	8	80.00	..	..	1	10.00
Bullocks	..	1	3.57	22	78.57	5	17.85	..	..
Bulls	..	..	..	..	..	1	100.00	..	..
Pigs	..	..	..	20	100.00	..	..	..	..
Calves	..	..	..	2	100.00	..	..	..	..

TABLE (6).

INSPECTION OF MEAT PREPARED OUTSIDE THE CITY BOUNDARY.

Table showing amount examined and the amount condemned.

	BEEF			MUTTON		PORK	VEAL	GOATS
	Sides	Quarters	Cuts	Carcases	Cuts	Carcases	Carcases	Carcases
Examined ..	1,957	205	3,201	2,687	382	45	4	36
Condemned ..	28	20	1	9	..	12	3	4

	HEADS			HEARTS		LUNGS		LIVERS	
	Beef	Mutton	Beef Tongues	Beef	Mutton	Beef	Mutton	Beef	Mutton
Examined ..	1007	23	1015	913	2517	690	2647	996	2626
Condemned ..	19	..	16	14	..	34	3	106	56

PORK INSPECTION.

During the year 67 Carcases of Pork were inspected at the Pork Market ; of these 1 Head and Tongue was seized and destroyed.

INSPECTION OF CATTLE IN DAIRIES.

The number of Cowsheds in the City was 90, accommodating 1,154 cows. Systematic Inspection was carried out, the cows being carefully examined as to their health, condition, cleanliness, etc.. and generally speaking were found to be satisfactory.

APPENDIX.

TABLE (1).

Return of Animals Slaughtered in the Municipal Abattoir.
(The figures for the previous year are given for comparison).

SPECIES			Number Slaughtered. Year 1930.	Number Slaughtered. Preceding Year.
Cattle	..	..	42,469	45,160
Calves	..	..	1,391	2,606
Sheep and Lambs	..	..	85,314	83,212
Pigs	..	..	9,384	11,305
Goats	..	..	1,083	1,406
Total	..	..	139,641	143,689

TABLE (2).

The following return shows the number of Diseased Organs seized and destroyed as being unsound and unfit for human food, during the year 1930, also the figures for the preceding year are given for comparison :—

	Year Ending 1930.	Preceding Year.	Increase.	Decrease
Beef Heads ..	64	64	..	..
„ Tongues ..	64	63	1	..
„ Hearts ..	34	33	1	..
„ Lungs ..	4,842	4,106	736	..
„ Livers ..	14,756	11,664	3,092	..
„ Stomachs ..	51	34	17	..
„ Udders ..	2,453	2,068	385	..
„ Kidneys ..	392	309	83	..
Pork Heads ..	10	5	5	..
„ Tongues ..	10	5	5	..
„ Hearts ..	14	6	8	..
„ Lungs ..	43	34	9	..
„ Livers ..	279	262	17	..
Goat Livers ..	59	74	..	15
Mutton Hearts ..	..	..	..	..
„ Lungs ..	..	..	..	..
„ Livers ..	7,984	8,490	..	506

NOTE.—The above Table does not include the viscera of animals totally destroyed. In addition to the above summary, there were 3 tons, 2 cwt., 2 qrs. 26lbs. of Beef, 1 cwt. 2 qrs. 5 lbs. of Mutton, and 2 cwt. 3 qrs. 3 lbs. of Pork seized as being unsound and unfit for human food.

I desire to express my thanks to the Staff of the Department for the manner in which they have carried out their duties.

(Signed)

City Veterinarian's Office,
Municipal Abattoir,
Belfast.

JOHN McCLURE BARRY,
City Veterinarian.

MILK SUPPLY.

Milkshops—

On Register 1st January	1,490
New Registrations effected during the year	212
Removed from Register during the year	201
Number of Visits made during the year	4,642
Special inspections with a view to the discovery of unregistered persons selling milk	54
Number of requests for registration refused	12
*Number of unregistered persons discovered selling milk	82
Number of new vessels provided by vendors for the storage, etc., of milk	270
Verbal notices given	42

*In the majority of instances where unregistered persons were found selling milk ignorance of the law was pleaded. If the premises were suitable the offenders had their names placed on the register and if unsuitable they immediately ceased selling milk.

During the year 169 samples of milk were taken and submitted to the City Bacteriologist for examination.

Return shewing the number of Milkshops and the Inspections made in each of the several Dispensary Districts.

Dispensary Districts	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
Purveyors	60	170	197	134	65	131	6	12	88	105	157	116	74	..	114	72	1501
Inspections	195	746	624	277	295	357	11	22	318	343	398	349	223	..	243	241	4642

Cowsheds—

On Register	90
Number of Cows	1,154
Number of inspections made	367
All Cowsheds were limewashed at least twice during the year.	

Return shewing the number of Cowsheds and the number of inspections made in each of the several Dispensary Districts.

Dispensary District	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
Cowsheds	..	2	2	9	..	4	4	17	21	7	6	6	8	1	3	..	90
Inspections	..	10	9	34	..	21	8	75	97	18	40	17	36	..	2	..	367

Return showing particulars of samples of food etc. taken for analysis during the year ended 31st December, 1930.

TABLE No. XVII.

Nature of Sample.	Samples taken.	Adulterations.	Prosecutions.	Convictions.	Dismissals.	Discharged on payment of costs.	Fines.
Aerated water	4	..	..	..	..	..	..
Ammoniated tincture of quinine	1	..	..	..	..	..	..
Arrowroot	1	..	..	..	..	..	..
Aspirin Tablets	3	..	..	..	..	..	..
Aspro Tablets	1	..	..	..	..	..	..
Baking powder	8	..	..	..	..	..	..
Barley	8	..	..	..	..	..	..
Beans and Pork	1	..	..	..	..	..	..
Beer	7	..	..	..	..	..	..
Beehive (Extract of wine and malt)	1	..	..	..	..	..	..
Black currant cordial	1	..	..	..	..	..	..
Brawn	1	..	..	..	..	..	..
Butter	153	4	3	3	..	..	8 0 0
Butter (informal)	12	4	..	..	..	..	..
Buttermilk	278	35	22	20	..	2	35 5 0
Buttermilk (informal)	17	6	..	..	..	..	..
Cheese	21	..	..	..	..	..	..
Chocolate	1	..	..	..	..	..	..
Cinnamon	1	..	..	..	..	..	..
Citrate of magnesia	5	..	..	..	..	..	..
Cocoa	18	..	..	..	..	..	..
Coffee	1	..	..	..	..	..	..
Coffee and chicory	3	..	..	..	..	..	..
Condensed milk	6	..	..	..	..	..	..
Confectionery	11	..	..	..	..	..	..
Cornflour	1	..	..	..	..	..	..
Corned meat	1	..	..	..	..	..	..
Cream	2	..	..	..	..	..	..
Cream of tartar	16	..	..	..	..	..	..
Custard powder	3	..	..	..	..	..	..
Dried milk	1	..	..	..	..	..	..
Dried fruit (currants and raisins)	16	..	..	..	..	..	..
Dripping	66	..	..	..	..	..	..
Egg substitute powder	2	..	..	..	..	..	..
Epsom salts	2	..	..	..	..	..	..
Flour	1	..	..	..	..	..	..
Gin	3	1	1	1	..	..	1 0 0
Ginger	2	..	..	..	..	..	..
Ginger wine	1	..	..	..	..	..	..
Glycerine	2	..	..	..	..	..	..
Ground ginger	3	1	1	..	1	..	..
Ground ginger (informal)	1	..	..	..	..	..	..
Honey	7	..	..	..	..	..	..
Jelly crystals	1	..	..	..	..	..	..
Lactone (Buttermilk substitute)	2	..	..	..	..	..	..
Lard	50	1	1	1	..	..	0 10 0
Lemon foam crystals	1	..	..	..	..	..	..
Linseed meal	2	..	..	..	..	..	..
Margarine	27	..	..	..	..	..	..
Meat paste (chicken, ham and tongue)	2	..	..	..	..	..	..
Mustard	7	..	..	..	..	..	..
Olive oil	2	..	..	..	..	..	..
Pepper	14	2	2	2	..	..	5 0 0
Pepper (informal)	1	1	..	..	..	..	..

TABLE No. XVII. (Continued)

Nature of Sample.	Samples taken.	Adulterations.	Prosecutions.	Convictions.	Dismissals.	Discharged on payment of costs.	Fines.
Pepper compound ..	1	1	1	..	1	..	..
Preserved peas ..	1	..	..	..	..	..	..
Raisins ..	1	..	..	..	..	..	..
Raspberry Jam ..	5	..	..	..	..	..	..
Rice ..	6	..	..	..	..	..	..
Rum ..	3	..	..	..	..	..	..
Sauce ..	17	..	..	..	..	..	..
Sausages ..	26	2	2	2	..	..	1 5 0
Self raising flour ..	2	..	..	..	..	..	..
Seidlitz powders ..	1	..	..	..	..	..	..
Skimmed milk ..	3	1	1	1	..	..	20 0 0
Skimmed milk (informal)	1	..	..	..	..	..	..
Stout ..	1	..	..	..	..	..	..
Sugar ..	1	..	..	..	..	..	..
Sugar (informal) ..	1	..	..	..	..	..	..
Sweetmilk ..	1,307	77	33	20	11	2	29 0 0
Sweetmilk (informal)	43	9	..	..	..	..	..
Sweetmilk (informal for extraneous dirt)	66	..	..	..	..	..	..
Sweet spirits of nitre ..	1	..	..	..	..	..	..
Tea ..	31	..	..	..	..	..	..
Vinegar ..	17	..	..	..	..	..	..
Vinegar (informal)	3	1	..	..	..	..	..
Whiskey ..	8	..	..	..	..	..	..
Whiskey (informal)	1	..	..	..	..	..	..
Wine ..	5	..	..	..	..	..	..
	2,355	146	67	50	13	4	100 0 0

In 1 case of butter, 13 of buttermilk and 44 of sweetmilk, the percentage below standard was so small no proceedings were taken but vendors were cautioned. In 6 cases of buttermilk, 9 of sweetmilk, 4 of butter, 1 of pepper and 1 of vinegar the samples were informal.

Return showing shops, etc., visited during the year 1930.

Description of Shops, Etc.					No. of Visits.
Butcher	..	..	..	..	2,902
Confectionery	..	..	..	..	65
Dairies	..	..	..	..	210
Fish	..	..	..	..	256
Fish and Chips	..	..	..	..	290
Fruit	..	..	..	..	1,375
Grocery	..	..	..	..	3,438
Ice Cream	..	..	..	..	424
Markets	..	..	..	..	203
Provision	..	..	..	..	1,625
Pork Stores	..	..	..	..	483
Railway Stations	..	..	..	..	731
Meat Factories	..	..	..	..	230
Cold Stores	..	..	..	..	54
Hawkers carts, etc.	..	..	..	..	747

SEIZURES.

24 carcasses of pigs.
 $\frac{1}{2}$ cwt. of bacon.
 1 barrel of pickled pork.
 2 cwt. of beef.
 4 quarters of beef.
 1 carcase of calf.
 22 rabbits.
 19 head of poultry.
 122 boxes of fish.
 20 cases of lemons.

THE PUBLIC ABATTOIR.

The Public Abattoir is situated in Stewart Street and covers an area of $3\frac{1}{4}$ acres. It is within easy access of the Cattle Market, Oxford Street, and Sale Yards, all of which are in the immediate vicinity, thus it will be seen that the Markets Committee, in their foresight, were fully justified in erecting the establishment in a central position as much time is thereby saved by the Butchers, owing to the fact that an animal for slaughter can be driven from the Markets and Auction Marts to the Abattoir inside five minutes. A special entrance from the Markets under one of the Archways of the Albert Bridge has also been provided by the Committee and is largely availed of by the Butchers on Mondays and Tuesdays of each week, the former day for transit of sheep and the latter for cattle. This arrangement, from a traffic point of view, is an excellent one, and greatly relieves congestion in the surrounding streets.

The present building, which was opened on 10th September, 1913, by the then Lord Mayor, was the outcome of a vigorous demand by the Fleshers of the City for ample accommodation for the slaughter of their animals under hygienic conditions, such facilities not being available in the Old Abattoir, McAuley Street. The Markets Committee to their entire credit erected the present modern Abattoir, which is one of the most up-to-date in the United Kingdom, and is used daily by the Butchers throughout the year. The facilities at the disposal of persons using the building are numerous, greatly appreciated, and include excellent Electric Lighting in the Killing and Dressing Sections, &c.; Electric Apparatus for transporting carcases from Slaughter Pens to Dressing Hall; Electric Hoists which raise carcases to any position for skinning; also special Twin Bar Overhead Trolley System by which the Dressed Sides of Beef are run into the Cooling Hall in a most expeditious manner, thus ensuring sufficient working space and freedom from congestion.

It may be of interest to explain the procedure as regards the slaughtering of Cattle, which is as follows:—

1. The animal is driven in and placed in the Live Cattle Lairage.
2. The animal is taken, when required, from the Lairage to Killing Pen (which is quite convenient) where it is stunned by means of the most up-to-date type of "Humane Killer," after which it is bled, the Blood being caught in special pans for the purpose.
3. The carcase is transported by electric machinery to the Skining Section where the intestines and hide are removed.
4. The Carcase in Meat form (sides of Beef) is taken to Cooling Hall where it remains twelve or more hours to stiffen before removal.
5. Sides of Beef removed by Butcher to Delivery Van for transit to Shop.
6. Beef examined by Checker to ensure same is properly labelled with owner's name and address as required by Bye-Law.

I may here mention that before removal all Meat is subject to a close inspection by the Public Health Officials who detain anything of an unsound or diseased nature.

I append particulars of the Abattoir Buildings, &c., also the present Staff and their duties.

Buildings, Etc.

1. THE ADMINISTRATIVE BLOCK contains Resident Foreman's Apartments in second storey; Veterinarian's Office, Laboratory, General Office and Toll Collector's Office, also Meat Inspectors' Rest Room, on Ground Floor, all with complete telephonic communication and necessary equipment.

2. MESS ROOM for use of Butchers prior to commencing their work.
3. LIVE SHEEP LAIRAGE BUILDING capable of accommodating 1,200 Sheep.
4. SHEEP KILLING HALL capable of providing accommodation for the slaughter of from 500 to 700 animals per day.
5. SHEEP HANGING HALL capable of storing upwards of 700 carcasses of Mutton.
6. LIVE PIG LAIRAGE BUILDING capable of accommodating 100 Pigs.
7. PIG KILLING AND HANGING HALL fitted up with the most modern appliances (including Special Hot Water Tanks for scalding purposes) with accommodation for 250 carcasses.
8. LIVE CATTLE LAIRAGE (220 ft. long x 48 ft. wide) capable of accommodating 250 Head of Cattle.
9. CATTLE KILLING PENS (20) (each $10\frac{1}{2}$ ft. long x 14 ft. wide).
10. CENTRAL CATTLE DRESSING HALL (220 ft. long x 40 ft. wide).
11. MEAT HANGING HALL (166 ft. long x 48 ft. wide) capable of storing 500 Carcasses of Beef, and fitted up with special overhead Twin Bar Trolleys for removing same.
12. REFRIGERATOR AND CHILL ROOMS capable of storing 150 carcasses of Beef, 300 carcasses of Mutton and 100 carcasses of Pork, per day.
13. BOILER HOUSE.
14. ENGINE HOUSE.
15. CONDEMNED MEAT STORE.
16. DIGESTER PLANT BUILDING.
17. TRIPE DRESSING STORES (2).
18. GUT DRESSING STORES (2).
19. BLOOD STORES.
20. BUTCHERS' LOCKERS.
21. WEIGHING MACHINES (various).
22. ELECTRIC CLOCKS (complete installation)

Staff (Markets Committee).

1 Manager	1 Charwoman
	3 Checkers
1 Resident Foreman	8 Porters (Cleaning Floors, Etc.)
	1 Constable
1 Toll Clerk	1 Mechanic
	1 Weighmaster
1 General Clerk	1 Night Watchman
	1 Fireman
1 Engineer	1 Digester Plant Operator
	1 Assistant Digester Plant Operator
1 Machineman	1 Refrigerator Operator

6

20

Total Staff .. 26.

From above return may be judged the extent of the establishment and the amount of supervision necessary. The work carried on is of a very varied nature and the description given of each Official and Employee covers the nature of their various duties.

Cattle Drinking Troughs.

The Markets Committee has authorised the expenditure of the sum of £850 for the complete installation of a special system of "self filling" Drinking Troughs in the Cattle Lairage, which will ensure that animals will have access to a plentiful supply of clean water at all times. The Tender for executing the work has been sanctioned by the Council and the improvements are now being carried out. When completed they will make the Cattle Lairage thoroughly up-to-date in every respect.

Humane Killers.

The Committee had under view, for some time past, the method of slaughtering animals at the Abattoir and after close examination and careful consideration came to the conclusion that the custom of felling animals with a large iron mawl was not satisfactory and rather out of date in comparison with English and Scotch Cities where modern improvements had been introduced; consequently, from experience of other Centres, the Committee deemed it necessary to introduce reforms in this direction, and, after careful thought, instructed the Town Solicitor to frame Bye-Laws, with a view to introducing the use of the "Humane Killer" in the Belfast Abattoir, as being the most humane and expeditious manner of slaughtering animals, and, consequently, on 1st October, 1929, the Corporation approved of the Bye-Laws (which were later confirmed by the Ministry of Home Affairs, N.I.) making compulsory the use of the "Humane Killer," with a provision for a Penalty of Five Pounds against every person who shall offend against any of said Bye-Laws. These Bye-Laws were put into operation on 19th March, 1930, the Markets Committee supplying the instruments which are of the latest types. There are 21 "Humane Killers" of various makes at present available for the Butchers, the majority of which have turned out highly satisfactory and proved quite safe in use. As a result of the fine example set by the Belfast Corporation several Municipalities and Urban Councils have since adopted the use of the "Humane Killer."

It will be seen from the above remarks that the Chairman (Councillor Charles Hinds, J.P.) and the Members of the Markets Committee have been instrumental in introducing reforms to alleviate the sufferings of animals prior to and during slaughtering operations, which deserve the best thanks of the Council and the entire community.

As an indication of the large increase of business at the Abattoir it may be stated that when the first Municipal Establishment was opened, as far back as 1870, the number of animals slaughtered amounted to 1,050 per annum, whilst during the year 1912 the number slaughtered in the Old Abattoir, McAuley Street, amounted to 81,783.

The following return shows the number of animals slaughtered in the present Abattoir during the year ended 31st December, 1930 :—

Cattle	..	..	..	..	42,469
Calves	..	..	..	..	1,391
Sheep and Lambs	..	..	..	..	85,314
Goats	..	..	..	..	1,083
Pigs	..	..	..	..	9,384
Total					139,641

The number of Butchers' Licences issued during the same period was 120.

The Abattoir during the past year has been kept in a thoroughly sanitary condition. The various Lairages and Buildings where animals are penned and slaughtered, have been kept systematically cleansed with a plentiful supply of water.

The property and machinery have been maintained in a satisfactory condition and the necessary repairs executed as occasion arose.

(Signed),

GEORGE A. KINNING,
Superintendent of Markets,
and Manager of the Abattoir.

Markets and Abattoir Department,
Belfast.

BOVINE TUBERCULOSIS (N.I.) ORDER, 1926.

Under the Bovine Tuberculosis (N.I.) Order, 1926, which takes the place of the Bovine Tuberculosis (Ireland) Order, 1914, it is the duty of Local Authorities to examine all bovine animals suffering from Tuberculosis in certain specified forms.

The Order requires every person having in his possession or under his charge.

- (a) A cow which is, or appears to be, suffering from tuberculosis of the udder, indurated udder or other chronic disease of the udder ; or
- (b) Any bovine animal which is, or appears to be, suffering from tuberculous emaciation ; or
- (c) Any bovine animal which is suffering from a chronic cough and showing definite clinical signs of tuberculosis,

to give information of the fact to a Constable of the Police Force for the area wherein the animal is, and the Constable in turn must transmit the information to the Local Authority and to the Department of Agriculture.

As soon as the information has been received by the local authority the animal is examined by their Veterinary Inspector who furnishes the local authority with the report of such examination. If the Inspector's report shows that the animal is suffering from the disease it is the duty of the local authority to notify the owner that it is their intention to slaughter the animal unless he (the owner) objects, notice of which must be given by him in writing to the local authority. If the owner objects the local authority cannot carry out the slaughter until authorised by the Department of Agriculture.

When an animal has been slaughtered a post-mortem examination is carried out by the Veterinary Inspector and a certificate of the result of the post-mortem made out by the Veterinary Inspector.

Prior to slaughter a valuation is fixed by the Veterinary Inspector which must be agreed to by the owner. If the certificate of the post-mortem examination shows that the animal was not suffering, the owner is entitled to an amount represented by the full valuation plus a further sum of 20/- as compensation ; if the certificate shows that the animal was suffering from tuberculosis (not being advanced tuberculosis) then the owner receives as compensation an amount equal to three-fourths of the valuation agreed upon, and if the certificate reveals advanced tuberculosis one-fourth of the valuation is paid to the owner.

Owners of suspected animals brought into the City from outside areas have the option of (a) returning them to the districts from which they were brought ; or (b) sending them to the slaughter house or other suitable premises in the district for examination.

During the year 1930, 126 animals were reported as suspicious, which necessitated the examination of 358. Of these 106 were slaughtered and post-mortem examinations carried out ; 1 was sent back to the district from which it was brought into the City, and the remainder were found not suffering on clinical examination. Of the animals slaughtered, 8 were found to be suffering from tuberculosis of the udder ; 43 were affected with other forms of tuberculosis, 55 were not affected. The total amount of compensation paid to the owners was £75 5s. 0d.

INFECTIOUS DISEASES.

Although the number of Infectious Diseases notified was more than in 1929 yet the greater part of the year may be described as " quiet " in so far as the incidence of Infectious Diseases is concerned. The first three quarters of the year

showed a comparatively small number of notifications, but during the last quarter the numbers of Scarlet Fever and Diphtheria showed an increase, but at no time did the numbers assume epidemic proportions. There was a small localised outbreak of Diphtheria (15 cases) in November and December in the north end of the city; the probable source of infection in this outbreak was traced to "school and street" contact with a boy who had an unrecognised attack of Diphtheria and in whom the diagnosis was ultimately confirmed as Diphtheria by the occurrence of post-diphtheritic paralysis and a "positive" nasal swab.

There was also a small outbreak of 7 cases of Paratyphoid Fever where the patients were removed from a general hospital; the history of this outbreak will be dealt with in next year's report as 5 of the cases were admitted to Purdysburn Fever Hospital during January, 1931.

It is gratifying to be able to report that the dangerous infectious diseases affecting the Central Nervous System (Cerebro-Spinal Fever, Acute Epidemic Encephalitis, and Acute Poliomyelitis) were not prevalent.

The total number of notifications received during the year was 1,957 this being an increase of 465 as compared with the year 1929.

The great bulk of the notifications referred to Scarlatina (1,132 notifications) and Diphtheria (618 notifications).

A reference to Table 28 will show that the cases were fairly evenly distributed over the city and that there was little tendency to localised outbreaks.

The non-notifiable Infectious Diseases (Measles, Whooping Cough, Chicken Pox, Mumps, Rubella, Influenza, etc.) were almost absent during the greater part of the year.

In my last Annual Report I intimated that the then existing methods for Measles control were quite inadequate, and that I was preparing a scheme dealing with the subject of notification and home visiting of cases. I foresaw that an epidemic of Measles was due at the end of the year and the forecast proved to be accurate by the occurrence of a rather sudden outbreak of Measles in the middle of December. I am pleased to be able to report that the Public Health Committee, on my recommendation, adopted the procedure for making Measles a notifiable disease under the Infectious Disease Notification Act, 1889, and this legislation came into force on 1st January, 1931. I had also put into operation a more thorough system for the voluntary notification of children absent from school by the School Teachers.

I shall deal with the epidemic of Measles and the methods adopted in dealing with it in my next annual report. Only a comparatively few cases occurred in the last fortnight of the year 1930, i.e., before the compulsory notification of the disease came into force.

During the year the non-notifiable infectious diseases treated in the Union Fever Hospital were as follows:—Measles, 29 cases, Whooping Cough 108 cases, Mumps 18 cases, Chicken Pox 83 cases, Rubella 127 cases, Influenza 84 cases.

TYPHUS FEVER.

There have been no cases of Typhus Fever in the city since 1928.

SMALL POX.

No case of Small Pox occurred in the city during the year. A baby aged 3 months, notified as Small Pox, was found to be suffering from Vaccinia. The child had 4 vaccination vesicles on the face which had apparently resulted from contamination with the lymph applied to the baby's arm for the purpose of vaccination. The baby had also accidentally vaccinated its mother on the left breast. A notification of Small Pox was received on 21st September, it was found

however, that the patient had a tertiary syphilitic eruption. The supervision of Small Pox contacts on board vessels coming from foreign ports is referred to in the section dealing with the Belfast Port Sanitary Authority.

SCARLET FEVER.

1,132 notifications of Scarlet Fever were received during the year, but on investigation 30 were found not suffering from the disease. In addition to those notified, 5 cases notified as Diphtheria or other illness were found to be suffering from Scarlet Fever, which made the total number that occurred during the year 1,102; an attack rate of 2.7 per 1,000 of the population.

The number of cases which occurred during the preceding year was 695, and the average number notified annually during the ten years 1920/1929 was 1,255.

The disease continued to be of a mild type, only 7 deaths being registered during the year under review, equivalent to the low case mortality rate of 0.6 per cent. or a death rate of 0.02 per 1,000 of the population. The number of deaths registered during the preceding year was 8, and the average number registered annually during the 10 years 1920/1929 was 30.

In 14 instances it was found that infection was probably contracted outside the city—the patients having been removed to the city before the minimum incubation period had elapsed.

DIPHTHERIA.

618 cases were notified but on investigation 52 were found not suffering from the disease; this made the total number of cases that occurred during the year 566, an attack rate of 1.4 per 1,000 of the population.

The number of cases that occurred during the preceding year was 442, and the average number notified annually during the 10 years 1920/1929 was 444; 22 deaths were registered, equivalent to a case mortality rate of 3.9 per cent. or a death rate of 0.05 per 1,000 of the population.

The number of deaths registered during the preceding year was 19 and the average number registered annually during the 10 years 1920/1929 was 31.

The procedure adopted last year of allowing "contact" children to return to school in 2 days if their throat swabs were found "negative" has been continued. This arrangement has given entire satisfaction. It is claimed that by adopting such a procedure much valuable school time is saved and the early detection of a secondary infected child or a diphtheria "carrier" is more easily accomplished.

The number of throat swabs taken from contacts and bacteriologically examined during the year was 1,778, of these 150 were positive and 1,628 negative.

DIPHTHERIA ANTITOXIN.

Stocks of Diphtheria Antitoxin are kept at six depots in the city. Medical Practitioners may make use of the Antitoxin in urgent cases which are attended at night or during the times when the supply of Antitoxin from chemists is not available. During the year 27 phials of 4,000 units of Antitoxin were issued from these depots. This Antitoxin was provided free of charge in necessitous cases, in others the supply was replenished at the expense of the patients.

A reference to the report of the City Bacteriologist will show that the Medical Practitioners in the city are making fuller use of the Municipal Laboratory in the bacteriological examination of throat swabs, and this practice is to be encouraged as a mistaken diagnosis is more liable to occur in the absence of bacteriological examination.

SCHICK TESTING AND IMMUNISATION AGAINST DIPHTHERIA.

During the year the "Schick" testing and immunisation against Diphtheria were only carried out in a small number of cases. These were done in order to determine the susceptibility of family contacts where a "carrier" had been discovered in the family—those found to be Schick positive were immunised with Toxoid-Antitoxin.

TYPHOID FEVER.

32 cases were notified. On investigation the diagnosis was revised in 3 cases. The remaining cases were classified in hospital, as 19 Typhoid and 10 Paratyphoid B, thus making a total of 30 cases, an attack rate of 0.07 per 1,000 of the population.

The number of cases which occurred during the preceding year was 70, and the average number notified annually during the 10 years, 1920-1929, was 116.

2 deaths were registered, equivalent to a case mortality rate of 6.7 per cent., or a death rate of 0.005 per 1,000 of the population.

The number of deaths registered during the preceding year was 4, and the average number registered annually during the 10 years 1920-1929, was 11.

TABLE NO. XIX.

Shewing the annual death rate per 1,000 of the population from Typhoid Fever during the 20 years 1911-1930, also the average rate for quinquennial periods.

Year.	Rate.		Year.	Rate.	
1911	0.04	0.04	1921	0.04	0.02
1912	0.04		1922	0.02	
1913	0.05		1923	0.01	
1914	0.07		1924	0.007	
1915	0.02		1925	0.04	
1916	0.05	0.07	1926	0.01	0.01
1917	0.10		1927	0.02	
1918	0.06		1928	0.03	
1919	0.04		1929	0.01	
1920	0.08		1930	0.005	

Average annual death rate for twenty years, 1911-1930, 0.04.

The usual investigations were made in all cases in order to trace the source of infection. Special attention was paid to the possibility of infection from "carriers" or from the consumption of contaminated shellfish, but in no case was the disease traced to these during the year. In this connection it should be recorded that the Belfast Corporation Act (Northern Ireland), 1930, which came into operation during the year, prohibits the gathering of Shellfish from the fore-shore of the Belfast Lough. This legislation was promoted in consequence of the liability of shellfish to be polluted, with the sewage effluent from the main Belfast sewerage outfall. The decrease in the number of cases of Enteric Fever which has occurred during the past 3 years is very gratifying. There is no reason why this decrease should not continue, and in the course of a few years we should see Belfast entirely free from this disease.

EPIDEMIC ENCEPHALITIS.

2 cases were notified during the year. This disease, known also as Encephalitis Lethargica or "sleepy sickness" now appears to be on the decline, although we still have about 100 persons, mostly young adults, suffering from the after effects of the disease which appeared in epidemic form in May and June, 1924, in the city. A large proportion of these "chronic" cases are of the Parkinsonian type ;

they show more or less mental or physical impairment. Although much work has been done in elucidating the problem as to the cause and cure of the disease, we are still without success in its solution. Attention has frequently been called to the necessity of making special provision for the hospital or institutional treatment of these patients as they are mostly unsuitable for treatment in a general hospital, but the question is beset with many difficulties and the existing arrangements appear to be the best obtainable at the moment. 40 chronic "sleepy sickness" cases were dealt with in the Union Fever Hospital during the year but many of these were re-admissions as they "come and go."

It is fortunate that very few of the acute type occur, as the disease is one of the most terrible, in its immediate and after effects, from which anyone can suffer.

ACUTE POLIOMYELITIS.

9 cases were notified during the year. The average number notified annually during the 10 years 1920-1929, was 2.

Of the 9 cases notified, 7 were children under 3 years of age, of whom 2 completely recovered without paralysis, paresis or deformity; 1 died, and the remaining 4 children are still undergoing treatment and, although 2 of them are able to walk about, the prognosis, from the paralysis point of view, is not hopeful. Two of the cases were adults—one, a girl aged 17, recovered, but was discharged from hospital with complete paralysis of both legs. One, a man aged 26, died of Landry's Paralysis after a few days' illness.

ERYSIPELAS.

109 cases were notified during the year, an attack rate of 0.26 per 1,000 of the population.

The number which occurred in the preceding year was 122, and the average number notified annually during the 10 years 1920-1929, was 88.

CEREBRO-SPINAL FEVER.

24 cases were notified during the year, and in addition 1 case notified as Diphtheria was found to be suffering from Cerebro-Spinal Fever; 7 of the notified cases were found not to be suffering from Cerebro-Spinal Fever, making a total of 18 cases; an attack rate of 0.04 per 1,000 of the population.

MEASLES.

6 deaths were registered as having been caused by this disease, equivalent to a death rate of 0.01 per 1,000 of the population. The number registered during the preceding year was 77, and the average number registered annually during the 10 years 1920-1929, was 94.

A more detailed survey of the incidence of Measles will be given in next year's Annual Report. The coming into operation of the Notification of cases of Measles on 1st January, 1931, will facilitate the compilation of such information.

WHOOPING COUGH.

65 deaths were registered during the year, equivalent to a death rate of 0.16 per 1,000 of the population. The number registered during the preceding year was 138 and the average number registered annually during the 10 years 1920-1929, was 104.

DIARRHOEA.

116 deaths of children under 2 years of age were registered as having been caused by this disease during the year, equivalent to a death rate of 0.28 per 1,000 of the population.

The number registered during the preceding year was 149, and the average number registered annually during the 10 years 1920-1929, was 200.

PUERPERAL FEVER.

20 cases of this disease were notified. The number of cases notified during the preceding year was 23, and the average number notified annually during the 10 years 1920-1929, was 20.

TABLE XX.

Shewing the rate per 1,000 of the population of cases of Infectious Diseases notified, pursuant to the Infectious Disease (Notification) Act, 1889, during the twenty years 1911-1930 ; also the average for the quinquennial periods.

Year.	Rate.		Year.	Rate.	
1911	3.8	5.8	1921	3.4	4.2
1912	3.7		1922	3.5	
1913	7.6		1923	3.4	
1914	7.5		1924	5.6	
1915	6.2		1925	5.3	
1916	3.8	4.7	1926	4.5	4.8
1917	2.7		1927	4.6	
1918	2.0		1928	6.5	
1919	8.4		1929	3.6	
1920	6.5		1930	4.7	

ZYMOTIC DISEASES.

218 deaths were caused by Zymotic Diseases during the year, equivalent to 4.0 per cent. of the total number of deaths registered from all causes, or a Zymotic death rate of 0.5 per 1,000 of the population. During the preceding year the deaths from Zymotic Diseases numbered 395, equivalent to 6.1 per cent. of the total deaths, or a death rate of 0.9.

2, or 0.9 per cent. of the total deaths from Zymotic Diseases were caused by Typhoid Fever ; 6 or 2.7 per cent. by Measles ; 7 or 3.2 per cent. by Scarlet Fever ; 65 or 29.8 per cent. by Whooping Cough ; 22 or 10.1 per cent. by Diphtheria ; and 116 or 53.2 per cent. by Diarrhœa.

The diseases from which the greatest number of deaths were registered were Diarrhœa, Whooping Cough and Diphtheria, the figures being respectively 116, 65 and 22. The comparative figures for the preceding year were 149, 138 and 19 respectively.

TABLE XXI.

Shewing the annual death rate per 1,000 of the population from Zymotic Diseases during the twenty years 1911-1930 ; also the average rate for quinquennial periods.

Year.	Rate.		Year.	Rate.	
1911	1.8	2.0	1921	1.4	1.1
1912	1.7		1922	0.6	
1913	2.3		1923	1.2	
1914	2.7		1924	1.0	
1915	1.7		1925	1.3	
1916	1.7	1.5	1926	1.3	0.9
1917	1.1		1927	0.9	
1918	1.8		1928	1.1	
1919	1.5		1929	0.9	
1920	1.5		1930	0.5	

TABLE XXII.

Shewing the number of deaths registered as having been caused by the principal Zymotic Diseases, also the annual rate of mortality per 10,000 of the population during the thirty-seven years 1894-1930 :—

Year.	POPULATION.	Typhoid Fever		Typhus Fever		Smallpox		Scarlet Fever		Simple Contin'd Fever		Diphtheria		Whooping Cough		Measles		Diarrhoea	
		Number of Deaths.	Annual Rate per 10,000.	Number of Deaths.	Annual Rate per 10,000.	Number of Deaths.	Annual Rate per 10,000.	Number of Deaths.	Annual Rate per 10,000.	Number of Deaths.	Annual Rate per 10,000.	Number of Deaths.	Annual Rate per 10,000.	Number of Deaths.	Annual Rate per 10,000.	Number of Deaths.	Annual Rate per 10,000.	Number of Deaths.	Annual Rate per 10,000.
1894	285,000	145	5.1	4	0.1	..	..	38	1.3	21	0.7	66	2.3	190	6.7	452	15.8	197	6.9
1895	295,000	184	6.2	19	0.6	..	..	88	3.0	29	1.0	34	1.2	109	3.7	197	6.7	325	11.0
1896	300,000	136	4.5	4	0.1	..	..	173	5.8	19	0.6	47	1.6	215	7.2	205	6.8	206	6.9
1897	310,000	354	11.4	5	0.1	..	..	32	1.0	16	0.5	38	1.2	187	6.0	124	4.0	355	11.4
1898	340,000	640	18.8	1	0.03	..	..	21	0.6	22	0.6	87	2.6	109	3.2	54	1.6	356	10.5
1899	350,000	263	7.5	1	0.03	..	..	24	0.7	10	0.3	61	1.7	215	6.1	146	4.2	285	8.1
1900	359,000	261	7.3	2	0.05	..	..	14	0.4	8	0.2	54	1.5	115	3.2	42	1.2	241	6.7
1901	350,862	341	9.7	8	0.2	1	0.03	13	0.4	26	0.7	65	1.9	162	4.6	240	6.8	292	8.3
1902	360,000	169	4.7	3	0.08	1	0.03	15	0.4	12	0.3	66	1.8	208	5.8	349	9.7	204	5.7
1903	360,000	136	3.8	4	0.1	..	..	24	0.7	18	0.5	40	1.1	168	4.7	125	3.5	277	7.7
1904	360,000	111	3.1	6	0.2	8	0.2	21	0.6	8	0.2	28	0.8	260	7.2	196	5.4	251	7.0
1905	360,000	128	3.6	1	0.03	1	0.03	35	1.0	6	0.2	32	0.9	24	0.7	227	6.3	295	8.2
1906	366,220	90	2.5	3	0.08	..	..	26	0.7	9	0.2	41	1.1	331	9.0	29	0.8	376	10.3
1907	370,163	82	2.2	3	0.08	..	..	13	0.3	2	0.05	38	1.0	64	1.7	201	5.4	212	5.7
1908	380,344	57	1.5	10	0.26	..	..	4	0.1	2	0.05	33	0.9	137	3.6	186	4.9	260	6.8
1909	386,576	20	0.5	..	..	..	..	4	0.1	2	0.05	18	0.4	213	5.5	10	0.3	244	6.3
1910	391,167 ²	18	0.5	1	0.03	..	..	18	0.5	5	0.1	27	0.7	259	6.6	504	12.9	241	6.2
1911	386,449	15	0.4	2	0.05	..	..	37	1.0	..	..	32	0.8	67	1.7	2	0.05	290	7.5
1912	391,974	17	0.4	2	0.05	..	..	48	1.2	..	..	37	0.9	217	5.5	171	4.4	159	4.1
1913	396,000	22	0.6	1	0.03	..	..	153	3.9	..	..	53	1.3	41	1.0	182	4.6	458	11.6
1914	399,000	26	0.7	11	0.3	..	..	168	4.2	..	..	31	0.8	205	5.1	205	5.1	457	11.5
1915	403,000	10	0.2	..	..	..	..	107	2.7	..	..	27	0.7	134	3.3	177	4.4	240	6.0
1916	390,000	19	0.5	4	0.1	..	..	52	1.3	..	..	28	0.7	120	3.1	191	4.9	236	6.1
1917	393,000 ²	39	1.0	6	0.15	..	..	11	0.3	..	..	22	0.6	57	1.5	98	2.5	180	4.6
1918	393,000	25	0.6	3	0.08	..	..	12	0.3	..	..	30	0.8	317	8.1	111	2.8	205	5.2
1919	401,000	17	0.4	1	0.02	..	..	138	3.4	..	..	30	0.7	9	0.2	137	3.4	263	6.6
1920	413,000	34	0.8	9	0.2	..	..	94	2.3	..	..	45	1.1	84	2.0	132	3.2	223	5.4
1921	420,000	15	0.4	3	0.07	..	..	11	0.3	..	..	31	0.7	222	5.3	17	0.4	279	6.6
1922	425,000	7	0.2	..	..	..	..	12	0.3	..	..	43	1.0	16	0.4	33	0.8	152	3.6
1923	429,000	4	0.09	..	..	..	..	26	0.6	..	..	24	0.6	182	4.2	126	2.9	154	3.6
1924	434,000	3	0.07	..	..	..	..	57	1.3	..	..	23	0.5	89	2.0	83	1.9	166	3.8
1925	438,000	18	0.41	..	..	..	..	49	1.1	..	..	38	0.9	99	2.3	167	3.8	203	4.6
1926	416,000	6	0.1	..	..	..	..	12	0.3	..	..	44	1.1	46	1.1	132	3.2	287	6.9
1927	416,000	8	0.2	..	..	..	..	10	0.2	..	..	30	0.7	117	2.8	1	0.02	195	4.7
1928	415,151	13	0.3	1	0.02	..	..	21	0.5	..	..	16	0.4	50	1.2	169	4.1	196	4.7
1929	415,151	4	0.1	..	..	..	..	8	0.2	..	..	19	0.5	138	3.3	77	1.9	149	3.6
1930	415,151	2	0.05	..	..	..	..	7	0.2	..	..	22	0.5	65	1.6	6	0.1	116	2.8

TABLE XXIX.

Showing the number of cases of Infectious Diseases notified pursuant to the Infectious Disease (Notification) Act, 1889, during the ten years, 1921-1930.

	Typhus Fever	Typhoid Fever	Scarlet Fever	Continued Fever	Diph- theria	Mem- braneous Croup	Small Pox	Cerebro- Spinal Meningitis	Polio- myelitis	Puerperal Fever	Erysipe- las	Relapsing Fever	Encephal- itis Lethargica	Ophthal- mia Nco- natorum	Measles
1920	26	210	1939	6	294	6	...	8	1	48	151	...	...	...	...
1921	10	123	786	7	409	5	4	7	...	14	64	...	2	13	...
1922	...	80	750	...	519	3	...	11	4	17	71	...	2	13	...
1923	...	46	984	1	289	7	...	3	1	13	89	...	20	11	...
1924	...	44	1818	...	280	6	...	...	1	9	42	...	221	6	...
1925	...	143	1657	3	419	4	...	5	...	5	54	...	10	6	...
1926	...	84	997	...	599	4	...	9	3	37	120	...	17	5	...
1927	...	168	1113	1	484	2	...	10	4	20	85	...	8	9	...
1928	3	186	1783	1	628	1	...	7	1	14	84	...	1	8	...
1929	...	76	721	2	484	1	...	11	1	23	122	...	5	46	...
1930	...	32	1132	...	618	...	...	24	9	20	109	...	2	...	11

TABLE XXIII.

Showing by Registrar's Districts the number of cases of Infectious Diseases notified pursuant to the Infectious Disease (Notification) Act, 1889.

DISTRICT.	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Simple Continued Fever.	Puerperal Fever.	Relapsing Fever.	Smallpox.	Diphtheria	Membrane- ous Croup.	Erysipelas	Cerebro- Spinal Meningitis.	Polio- mye- litis.	Encephalitis Lethargica.	Total
1. Dock	26	..	..	..	..	12	..	6	2	..	..	49
2. Duncairn	141	..	3	..	..	56	..	15	4	..	..	230
3. Shankill	128	..	2	..	..	99	..	9	..	2	..	242
4. Workhouse	123	..	1	..	..	68	..	18	4	2	1	217
5. Millfield	36	..	3	..	..	41	..	2	1	..	..	84
6. College	71	..	2	..	..	43	..	8	2	..	..	128
7. Greencastle	16	..	..	..	..	2	..	..	..	..	..	18
8. Ligoniel	17	..	1	..	..	11	..	1	..	..	..	30
9. Falls	46	..	3	..	..	72	..	6	3	1	..	134
10. Woodvale	113	..	1	..	..	52	..	7	2	2	..	182
11. Ravenhill	160	..	..	..	..	55	..	9	1	..	..	228
12. Ballynacarett	115	..	1	..	..	23	..	9	..	1	1	152
13. Ballyhackamore	75	..	1	..	..	24	..	2	..	..	..	102
14. Ballymaghan
15. Central	17	..	1	..	..	38	..	11	4	1	..	72
16. Pottinger	48	..	1	..	..	22	..	6	1	..	..	78
Total	..	32	1132	..	20	..	..	618	..	109	24	9	2	1946

TABLE XXIV.

Showing by ages and sexes the number of cases of Infectious Diseases notified, pursuant to the Infectious Disease (Notification) Act, 1889.

DISEASE.	Under 1 Year.		1 Year and under 2 Years.		2 Years and under 5 Years.		5 Years and under 10 Years.		10 Years and under 15 Years.		15 Years and under 20 Years.		20 Years and under 25 Years.		25 Years and under 45 Years.		45 Years and under 65 Years.		65 Years and upwards.		Age unknown.		Total No. Males.	Total No. Females.	Grand Total.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F			
Typhus Fever
Typhoid Fever	1	..	2	3	2	2	2	2	..	3	5	7	1	..	1	..	1	..	13	19	32
Scarlet Fever	..	3	20	21	131	140	243	288	63	97	21	22	13	15	5	26	6	3	..	..	6	..	511	621	1132
Simple Fever
Puerperal Fever	2	..	8	..	..	..	..	..	..	20	20	20
Relapsing Fever
Smallpox
Diphtheria	..	7	17	21	67	76	97	123	47	53	11	23	6	15	12	26	3	3	..	..	3	..	270	348	618
Membranous Croup
Erysipelas	1	..	..	..	1	..	..	..	1	..	1	2	1	1	..	38	62	41	68	109
Cerebro-Spinal Meningitis	..	4	3	3	..	2	2	..	1	1	1	..	..	..	1	..	..	..	..	1	..	..	12	12	24
Poliomyelitis	2	2	2	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	5	4	9
Encephalitis Lethargica	1	..	1	..	1	1	2	2
	14	13	42	47	201	219	344	414	113	154	35	48	19	36	24	68	12	8	1	1	48	85	853	1093	1946

INFECTIOUS DISEASES.

NOTIFICATIONS.

TABLE XXV.

Shewing the number of cases of Infectious Diseases notified pursuant to the Infectious Disease (Notification) Act, 1889, as having occurred in each of the four quarters.

DISEASE.	Quarter Ended				TOTAL.
	29th March, 1930	28th June, 1930.	27th Sept., 1930.	3rd Jan., 1931.	
Typhus Fever .. ..	..	..	..	..	..
Typhoid Fever	10	6	6	10	32
Scarlet Fever	169	172	206	585	1132
Simple Fever .. ..	..	..	..	..	..
Puerperal Fever	10	2	3	5	20
Relapsing Fever .. ..	..	..	..	..	..
Smallpox .. ..	..	..	..	..	..
Diphtheria	189	90	100	239	618
Membraneous Croup .. ..	..	..	..	..	..
Erysipelas	32	23	13	41	109
Cerebro Spinal Meningitis	11	7	4	2	24
Poliomyelitis .. ..	..	2	5	2	9
Encephalitis Lethargica	1	..	1	..	2
Total	422	302	338	884	1,946

CORRECTED DIAGNOSIS.

3 cases notified as typhoid fever ; 30 as scarlet fever ; 52 as diphtheria; and 7 cerebro-spinal meningitis, were found not suffering from the diseases notified. Of these, 5 cases notified as diphtheria were found to be suffering from scarlet fever ; and 1 case notified as diphtheria was found to be suffering from cerebro-spinal meningitis. The remainder were not suffering from any notifiable infectious disease.

DISINFECTING STATION.

The work undertaken at the Disinfecting Station includes :—

The disinfection of bedding and clothing from houses where cases of Infectious Diseases have occurred.

The personal bathing and disinfection of the clothing of persons who have been in contact with Infectious Diseases, and whose business includes the handling of food-stuffs.

The delivery once per month of a quantity of disinfectants to each non-transferred Public Elementary School in the City.

The disinfection of clothing, etc., intended for export to the Irish Free State, for which service a small charge is made.

The cleansing of Emigrants who have failed to pass the United States Medical Inspector at the port, and the disinfection by steam or otherwise of all their baggage is also undertaken. For this service the various Shipping Companies are charged a fee of £10 for the use of the plant and staff on each occasion, plus a charge of 5/- per person dealt with.

We have also attached to the Disinfecting Station a Store where the various disinfectants are kept, and from where a supply of dilute disinfectants is given out to those poor persons who apply for same.

Tables giving a summary of the various phases of the work done at the Disinfecting Station, and of the work done by the Motor Vans, also of the quantity of disinfectants dealt with, and the distribution of same from the Disinfectant Store during the year will be found in the report.

TABLE XXVII.

DISINFECTANTS.

IN STOCK AND RECEIVED DURING THE YEAR.

	Civic Fluid	Septol	Duncrue	Formaldehyd	Paraffin	Creosol	Crude Oil	" Petroleum Fluid	Izal	Sulphur Cakes	Carbolic Acid.
In Stock, January, 1930	40 gals.	16 gals.	47½ gals.	W. Qts. 3	42 gals.	5 gals.	160 gals.	80 gals.	21 gals.	1 gross	3 gals.
Received during 1930	520 gals.	40 gals.	120 gals.	40 gals. and 30 W. Qts.	80 gals.	5 gals.	160 gals.	80 gals.	21 gals.	1 gross	3 gals.
Total	560 gals.	56 gals.	167½ gals.	40 gals. and 33 W. Qts.	122 gals.	5 gals.	160 gals.	80 gals.	21 gals.	1 gross	3 gals.

TABLE XXVIII.

DISTRIBUTION OF DISINFECTANTS FOR THE YEAR.

[illegible]

REPORT OF DR. A. GARDNER ROBB.—MEDICAL OFFICER.
BELFAST UNION—HOSPITAL REPORT.
SUMMARY FOR 1930.

	Remaining 28/12/29	Admitted	Gross Total	Remaining 27/12/30	Nett Total	Deaths	% Mortality
Typhoid .. ..	..	6	6	..	6	..	0.0*
Epidemic Diarrhoea .. ..	..	..	..	..	..	..	0.0
Measles	2	27	29	15	14	..	0.0
Scarlatina .. ..	..	89	89	19	70	..	0.0*
Whooping Cough	21	87	108	4	104	11	10.58
Mumps .. ..	..	18	18	..	18	..	0.0
Chicken Pox	4	79	83	2	81	..	0.0
Erysipelas	3	70	73	7	66	6	9.09
Diphtheria .. ..	..	33	33	..	33	2	6.06*
General Medical	22	270	292	21	271	13	4.80
Rubella	2	125	127	..	127	..	0.0
Pneumonia	2	23	25	7	18	5	27.78
Tonsillitis	6	228	234	7	227	..	0.0
Epidemic Encephalitis .. ..	..	2	2	..	2	..	0.0
Chronic Encephalitis	29	11	40	22	18	..	0.0
T. B. Meningitis	1	9	10	..	10	10	100.00
Influenza .. ..	..	84	84	4	80	3	3.75
Quarantine .. ..	..	..	..	..	..	..	0.0
Cerebro-Spinal Fever .. ..	..	8	8	..	8	..	0.0*
Tetanus .. ..	..	1	1	..	1	..	0.0
Acute Poliomyelitis .. ..	..	1	1	..	1	1	100.00
Pneumococcal Meningitis .. ..	..	2	2	..	2	1	50.00*
Total	92	1173	1265	108	1157	52	4.49

*The cases of Typhoid, Scarlatina, Diphtheria, Cerebro-Spinal Fever and Pneumococcal Meningitis were not all treated to a conclusion, many being transferred to Purdysburn Fever Hospital.

PURDYSBURN FEVER HOSPITAL.

To the Chairman and Members of the Public Health Committee.

GENTLEMEN,

I have the honour to present to you the following report on the working of Purdysburn Fever Hospital for the year 1930 (53 weeks ended 3rd January, 1931).

2,053 cases were admitted during this period, there remained from the previous year 153 cases, making a total of 2,206 cases under treatment.

1,880 of these were treated to a conclusion, leaving 326 cases in hospital at the end of the year.

The number of admissions in the previous year had been 1,473, and the average number of admissions in the previous five years 2,105.

TABLE I.

Showing the classification of the cases, and the mortality in cases treated to a conclusion.

Disease.	Remain- ing on 28/12/29	Admitted during year	Total	Remain- ing on 3/1/31	Nett	Died	Mortality % calculated on cases treated to a conclusion
Enteric—Typhoid	.. 2	19	21	1	20	1	5.00
Enteric—Para A.	.. ..	..	..	..	..	..	..
Enteric—Para B.	.. 4	12	16	2	14	1	7.14
Typhus	.. ..	..	..	..	..	..	..
Scarlatina	.. 53	1178	1231	233	998	7	0.70
Diphtheria	.. 87	598	685	79	606	27	4.46
Diphtheria Carrier	.. ..	17	17	..	17	..	0.00
Cerebro-Spinal Fever	.. ..	20	20	1	19	5	26.32
Pneumonia	.. ..	3	3	..	3	1	33.33
Tubercular Meningitis	.. ..	7	7	..	7	7	100.00
Other Diseases	.. 7	187	194	10	184	17	9.23
Quarantine	.. ..	10	10	..	10	..	0.00
Epidemic Encephalitis	.. ..	..	..	..	..	..	..
Acute Poliomyelitis	.. ..	2	2	..	2	1	50.00
Smallpox	.. ..	..	..	..	..	..	..
Totals	.. 153	2053	2206	326	1880	67	3.56
Comparative Numbers in 1929	277	1473	1750	153	1597	40	2.50

ENTERIC FEVER.

31 cases of Enteric were admitted during the year. These included 19 cases of Typhoid and 12 cases of Paratyphoid B.

There were no cases of Paratyphoid A.

2 cases of Typhoid and 4 cases of Paratyphoid B. remained from the previous year, making a total of 21 cases of Typhoid and 16 cases of Paratyphoid B. under treatment. At the end of the year 1 case of Typhoid and 2 cases of Paratyphoid B. remained over.

Thus 20 cases of Typhoid and 14 cases of Paratyphoid B. were treated to a conclusion.

Total enterics 34, of whom 2 died; case mortality 5.88 per cent.

Of the 31 admissions 30 came from the city and 1 from outside the city boundary.

In the previous year the admissions numbered 83.

The average number of admissions in the previous five years was 137.

TABLE II.

Showing the case mortality in age periods in Typhoid (B. Typhosus).

Ages.	Cases.	Died.	Mortality per cent.
Under 5 years	.. 3	0	0.00
5—10	.. 3	0	0.00
10—20	.. 4	0	0.00
20—30	.. 5	1	20.00
Over 30	.. 5	0	0.00
Totals	.. 20	1	5.00

TABLE III.

Showing the case mortality in age periods in Paratyphoid B.

Ages.		Cases.	Died.	Mortality per cent.
Under 5 years	—	—
5—10	—	—
10—20	5	20.00
20—30	2	0.00
Over 30	7	0.00
Totals	14	7.14

TABLE IV.

Showing the number of Enteric Fever Cases admitted in each month.

January	..	..	1	July	..	..	0
February	..	..	7	August	..	..	1
March	..	..	3	September	..	..	4
April	..	..	1	October	..	..	7
May	..	..	0	November	..	..	1
June	..	..	3	December	..	..	3

DIPHThERIA.

598 cases were admitted during the year, making with the 87 cases remaining from the previous year, 685 cases under treatment.

79 cases still remained in hospital at the end of the year.

606 cases were treated to a conclusion with 27 deaths giving a case mortality of 4.46 per cent.

6 cases died within 12 hours of admission, 4 within 12 and 24 hours of admission and 1 within 48 hours of admission.

Of the 598 admissions 562 came from the city and 36 from outside the city boundary.

In the previous year the admissions numbered 474.

The average number of admissions in the previous five years was 484.

TABLE V.

Showing the case mortality in age periods.

Ages.		Cases.	Died.	Mortality per cent.
Under 1 year	9	11.11
1—2	35	14.29
2—5	142	4.92
5—10	233	4.26
10—20	120	2.50
20—30	44	0.00
Over 30	23	4.34
Totals	606	4.46

LARYNGEAL DIPHTHERIA.

61 cases required operative interference for laryngeal obstruction.

6 cases died giving a case mortality of 9.83 per cent.

TABLE VI.

Showing results in age periods in cases in which, intubation of the larynx was performed.

Ages.			Cases.	Died.	Mortality per cent.
Under 1 year	..	..	5	1	20.00
1—2	..	..	13	2	15.37
2—3	..	..	7	0	0.00
3—4	..	..	12	1	8.33
4—5	..	..	11	1	9.09
Over 5	..	..	13	1	7.68
Totals	..	..	61	6	9.83

DIPHTHERIA "CARRIER."

17 cases of Diphtheria Carriers were admitted during the year, and all were treated to a satisfactory conclusion.

CEREBRO-SPINAL FEVER.

20 cases of Cerebro-Spinal Fever were admitted during the year, 1 case remained at the end of the year so that 19 cases were treated to a conclusion. Of these 5 died giving a case mortality of 26.32 per cent. One of these cases died within 6 hours of admission.

Of the 20 admissions, 18 came from the city and 2 from outside the city boundary.

In the previous year the admissions numbered 12.

TUBERCULAR MENINGITIS.

7 cases of Tubercular Meningitis were admitted during the year, and all terminated fatally.

ACUTE POLIOMYELITIS.

2 cases of Acute Poliomyelitis were admitted during the year. 1 case recovered and was discharged with a considerable amount of permanent paralysis. 1 case died of Landry's Paralysis.

PNEUMONIA.

3 cases of Pneumonia were admitted during the year, 1 of which died giving a case mortality of 33.33 per cent.

EPIDEMIC ENCEPHALITIS.

There were no admissions of Epidemic Encephalitis during the year.

TYPHUS

There were no admissions of Typhus Fever during the year.

SCARLATINA.

1,178 cases were admitted during the year, making, with 53 cases remaining over from the previous year, a total of 1,231 cases under treatment.

233 cases still remained in hospital at the end of the year, so that 998 cases were treated to a conclusion.

7 of these ended fatally giving a case mortality of 0.70 per cent.

Of the 1,178 admissions 1,090 came from the city and 88 from outside the city boundary.

In the previous year 723 cases were admitted.

The average number of admissions in the previous five years was 1,269.

SCARLATINA.

TABLE VII.

Showing the case mortality in age periods.

Ages.			Cases.	Died.	Mortality per cent.
Under 1 year	..	..	6	0	0.00
1—2	..	..	39	2	5.13
2—5	..	..	236	2	0.85
5—10	..	..	466	3	0.64
10—20	..	..	183	0	0.00
20—30	..	..	43	0	0.00
Over 30	..	..	25	0	0.00
Totals	..	..	998	7	0.70

Fatal cases of Scarlatina :—

1 child, age 4 years, admitted on 17th day of illness, died of Nephritis on the 20th day.

1 child, age 3 years, admitted on 7th day of illness, died of Toxaemia on the 8th day. 17 hours in hospital.

1 child, age $7\frac{1}{2}$ years, admitted on the 4th day of illness, died of Meningitis on the 65th day. This child had a relapse and developed a Mastoid and failed to respond to operation.

1 child, age $1\frac{5}{12}$ years, admitted on 8th day of illness, died of Sepsis on the 30th day.

1 child, age 7 years, admitted on 3rd day of illness, died of Erysipelas on the 10th day.

1 child, age 8 years, admitted on 3rd day of illness, died of Sepsis on the 22nd day.

1 child, age $1\frac{8}{12}$ years, admitted on 2nd day of illness died of Gastro-Enteritis on the 10th day.

“ RETURN CASES ”

In 27 instances the return home of a patient from hospital was followed by other cases in the house, giving a return case rate of 2.71 per cent. On the average these 27 cases had reached the 41st day from the onset of the disease when they were discharged.

OTHER DISEASES.

187 cases of “ Other Diseases ” were admitted during the year. These included cases admitted for observation and which did not develop any of the ordinary infectious diseases, and also members of the staff who became ill from causes other than infectious diseases, and who were warded in the Isolation Pavilion for convenience of nursing.

7 cases remained from the previous year, and 10 remained at the end of this year, so that the number of cases treated to a conclusion was 184.

Of these 17 died giving a case mortality of 9.23 per cent. The causes of these deaths were as follows :—

Broncho-Pneumonia 4, Pneumococcal Meningitis 4, Influenzal Meningitis 1, Staphylococcal Meningitis 1, Pulmonary Tuberculosis 1, Gastro-Enteritis 2, Marasmus 2, Convulsions 1, Senile Myocarditis 1.

INFECTIOUS DISEASES AMONGST THE STAFF.

2 Nurses developed Scarlatina.
2 Maids developed Diphtheria.
All made good recoveries.

The Staff at the end of the year consisted of :—

1 Medical Superintendent	1 Foreman Gardener.
1 Resident Medical Officer.	3 Groundsmen.
1 House Physician	1 Matron.
1 Temporary House Physician.	1 Assistant Matron.
1 Steward.	1 Night Superintendent.
1 Clerk.	1 do. do. (Joint).
1 Storekeeper.	1 Housekeeper.
1 Engineer.	9 Ward Sisters.
2 General Mechanics.	42 Nurses.
3 Motor Drivers.	1 Seamstress.
1 Van Man.	1 Head Laundress.
4 Firemen.	5 Laundry Maids.
1 Pumping Station Engine Man.	1 Cook.
5 Day Porters.	3 Kitchen Maids.
1 Gate Porter.	15 Ward Maids.
1 Night Porter.	5 General Maids.
1 Disinfecter.	

Throughout the year the staff have discharged their responsible duties very satisfactorily.

I am,

Gentlemen,

Your obedient Servant,

A. GARDNER ROBB,

Visiting Physician in Charge.

MUNICIPAL LABORATORY,
 QUEEN'S UNIVERSITY,
 BELFAST,
 29th May, 1931.

Dear Sir,

I beg to present the report of the work carried out in the laboratory during the year 1930.

The number of specimens submitted for examination was 12,070 an increase of over 1,000 on the figures of last year.

The work may be summarised in the following way:—

INFECTIOUS DISEASES.					
DIPHTHERIA—					
Throat Swabs	..	..	4,546		
Nasal Swabs	..	..	1,092		
Direct Examinations	..	..	276		
Virulence Tests	..	..	33		
			—	..	5,947
VINCENT'S ANGINA	..	..	..	..	81
ENTERIC GROUP—					
Agglutination Tests	..	..	324		
Faeces, Blood, Urine, etc.	..	..	20		
			—	..	244
TYPHUS—					
Wilson-Weil-Felix Reaction	..	..	..	..	3
MENINGITIS—					
Cerebro-Spinal Fluids	..	..	..	..	240
TUBERCULOSIS—					
Sputa	..	..	590		
Pus	..	..	17		
Urine	..	..	114		
Pleural Fluids	..	..	25		
C.S. Fluids	..	..	77		
Faeces	..	..	6		
			—	..	832
VENEREAL DISEASES.					
Wassermann Reactions	..	..	1,577		
Microscopical Examinations	..	..	201		
			—	..	1,778
PATHOLOGICAL EXAMINATIONS.					
Tumours, etc.	..	..	132		
RINGWORM.					
Hairs for spores, etc.	..	..	30		
PLAGUE.					
Rats	..	..	70		
MILK EXAMINATIONS.					
Fresh Milk	..	..	487		
Pasteurised Milk	..	..	9		
Examinations for B. Tuberculosis	..	..	652		
			—	..	1,148
WATER AND FOODSTUFFS.					
Waters	..	..	32		
Ice Cream	..	..	72		
Foods	..	..	5		
VACCINES.					
Autogenous	..	..	93		
Tuberculin	..	..	11		
Stock	..	..	139		
			—	..	243
UNCLASSIFIED EXAMINATIONS.					
Urines, etc.	..	..	..	..	1,113
GRAND TOTAL	..	..	..	..	12,070

In the following tables a more detailed consideration is given to the above groups.

TABLE I.
Swabs examined for Diphtheria.

Month	Throat Swabs	Pos.	Neg.	Nasal Swabs	Pos.	Neg.	From Doctors	From Hosps.	School Med. Ser.	Total
Jan.	508	159	349	106	20	86	121	303	190	614
Feb.	458	138	320	90	12	78	75	345	128	548
Mar.	503	149	354	118	14	104	98	338	185	621
April	330	74	256	55	5	50	92	191	102	385
May	265	48	217	44	2	42	114	119	76	309
June	235	48	187	58	9	49	68	131	94	293
July	230	50	180	58	14	44	55	165	68	288
Aug.	207	40	167	71	12	59	44	133	101	278
Sept.	275	30	245	78	7	71	75	152	126	353
Oct.	430	97	333	114	10	104	117	192	235	544
Nov.	514	113	401	155	29	126	131	271	267	669
Dec.	591	111	480	145	31	114	159	371	206	736
Total	4546	1057	3489	1092	165	927	1149	2711	1778	5638

276 Swabs were examined by the direct method for Diphtheria. Of these 33 were returned positive.

33 Virulence Tests were performed, of which 27 were positive.

81 Swabs were examined for Vincent's Angina ; in 43 of these the causal organisms were present.

TABLE II.
Blood from suspected Enteric Group Infections.

Month	Positive			Negative			From Doctors	From Hospitals	Total
	T	A	B	T	A	B			
January	1	0	0	7	8	8	5	3	8
February	1	0	0	15	16	16	9	7	15
March	1	0	1	10	11	10	7	4	11
April	1	0	0	3	4	4	1	3	4
May	1	0	1	13	14	13	12	2	14
June	1	0	1	8	9	8	8	1	9
July	0	0	0	4	4	4	3	1	4
August	0	0	1	12	12	11	10	2	12
September	1	0	0	5	6	6	4	2	6
October	0	0	1	9	9	8	3	6	9
November	0	0	1	9	9	8	5	4	9
December	0	0	0	6	6	6	3	3	6
Total	7	0	6	101	108	102	70	38	108

Of the 13 positive reactions, 7 were positive to Typhoid, 6 to Paratyphoid B., and none to Paratyphoid A.

Wilson-Weil-Felix tests were done on 3 samples of blood, all of which were negative.

TABLE III.

Examination of Sputa for B. Tuberculosis, etc.

Source	Positive	Negative	Total
Hospitals	3	27	30
General Practitioners ..	97	463	560
Total	100	490	590

66 Specimens of Sputa were examined for organisms other than B. Tuberculosis

TABLE IV.

Examinations of Cerebrospinal Fluids.

Month	B. Tuberculosis		Meningococci		Other Organisms		Cell Count.	Total
	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.		
January	1	6	6	2	0	4	0	19
February	1	9	9	11	0	10	0	40
March	1	7	2	5	0	5	0	20
April	0	3	1	3	0	3	0	10
May	0	9	0	8	0	6	2	25
June	0	4	1	5	0	5	0	15
July	0	2	0	2	0	2	0	6
August	0	8	2	11	1	8	0	30
Sept.	0	7	2	7	0	9	1	26
October	0	6	0	6	0	6	0	18
November	0	2	0	2	0	2	0	6
December	0	8	2	6	1	8	0	25
Total	3	71	25	68	2	68	3	240

Of the two Cerebrospinal Fluids which contained other organisms, one gave a pure culture of Pneumococci and the other a pure culture of Staph. Aureus.

RINGWORM.

30 Specimens of hairs were submitted for examination; of these 10 were infected with the small spored fungus.

TABLE V.

Examinations carried out under the Venereal Diseases Scheme.

The number of specimens submitted during the year was 1,778.

Source of specimens

	Blood.	Smears.
Co. Borough of Belfast ..	1,549	194
Co. Antrim	7	0
Co. Down	13	0
Co. Armagh	1	0
Co. Tyrone	3	0
Co. Fermanagh	1	0
Co. Derry	0	2

The specimens can be grouped as follows:—

Detection of Treponemata	5
Detection of Gonococci	196
Wassermann Reactions (Blood)	1,574
Wassermann Reactions (C.S.F.)	3

WASSERMANN REACTIONS.

Stage of Syphilis indicated by Clinical Report.	No. of Tests.	Number Positive	Number Negative
Primary	75	27	48
Secondary, Untreated ..	73	14	59
Secondary, Treated ..	32	14	18
Tertiary	400	79	321
Latent, Untreated ..	624	93	531
Latent, Treated ..	73	18	55
Congenital	263	46	217
Particulars not Stated ..	34	10	24
	1,574	301	1,273

45 Specimens of blood were taken from patients referred to the Laboratory by General Practitioners.

BACTERIOLOGICAL EXAMINATIONS OF MILK.

During the year 1,148 examinations were made. 487 of these were specimens of fresh milk, 9 were of pasteurised milk, and 156 were examined specially for B. Tuberculosis.

TABLE VI.

This table shows the number and classification per month.

Month	Pasteurised Milk	Fresh Milk	Spetially examined for B. Tuberculosis	Total
January	0	48	12	60
February	0	45	16	61
March	0	36	0	36
April	2	34	10	46
May	0	47	20	67
June	0	44	24	68
July	1	31	4	36
August	2	42	18	62
September	0	43	12	55
October	3	41	12	56
November	0	41	14	55
December	1	35	14	50
	9	487	156	652

TABLE VII.

This table shows the source of the specimens of milk.

Month	Street	Milkshop	Railway	Other Sources	Total
January	13	19	0	16	48
February	14	17	0	14	45
March	20	16	0	0	36
April	25	11	0	0	36
May	23	21	0	3	47
June	28	16	0	0	44
July	24	4	4	0	32
August	30	14	0	0	44
September	35	8	0	0	43
October	34	10	0	0	44
November	25	12	4	0	41
December	31	5	0	0	36
	302	153	8	33	496

Of 496 specimens of milk, 223 contained lactose fermenting organisms in 1/100cc., i.e. 44.96%.

100 specimens (20.16%) showed more than 200,000 organisms per cc.

652 examinations for B. Tuberculosis were made ; 496 of these were done by the direct method and 156 by the biological method. Of these latter, 13 were infected with live B. Tuberculosis. This gives a percentage of 8.33%.

TABLE VIII.

Miscellaneous Examinations.				
Urine Examinations, Microscopical	..	..	..	263
Urine Examinations, Chemical	..	..	..	132
Urine Examinations, Bacteriological	..	..	..	387
Pus	..	..	..	155
Pathological Fluids	..	..	..	25
Faeces	..	..	..	23
Blood Cultures	..	..	..	10
Blood Films and Counts	..	..	..	52
Sputa, other than T.B.	..	..	..	66
				<hr/>
				1,113

I am, Sir,

Your obedient servant,

GEO. F. W. TINSDALE,
City Bacteriologist.

To Dr. Thomson, M.S.O.H.,
City Hall,
Belfast.

PORT SANITARY AUTHORITY, BELFAST.

The Corporation of Belfast as the Sanitary Authority was permanently constituted the Port Sanitary Authority for the Port of Belfast by the Local Government Board (Ireland) Provisional Orders Confirmation (No. 4) Act, 1900.

The jurisdiction of the Port Sanitary Authority extends to all that part of the said port of Belfast which lies on the landward side of a straight line drawn from Blackhead in the Larne Rural District to Orlock Point in the Newtownards Rural District, together with the waters of the said Port of Belfast, within such limits, and all docks, basins, harbours, creeks, rivers, channels, bays and streams, within the aforesaid limits, and the place or places which may from time to time be appointed as the Customs Boarding Station or Stations for such part of the said Port, and the place or places for the time being appointed for mooring or anchoring of ships for such part of the said port under any regulations for the prevention of the spread of diseases issued under the statutes in that behalf and for the purpose of any regulations as aforesaid shall also extend to any ship which in pursuance thereof, or of any directions given thereunder may be moored or anchored at the place appointed thereunder as aforesaid or which may be on its way thither. The expenses of the Port Sanitary Authority are contributed by the Urban and Rural Sanitary Authorities in the following proportions—

The Corporation of Belfast	92%
The Carrickfergus Urban District Council ..	1%
The Holywood Urban District Council ..	1%
The Bangor Borough Council	1%
The Belfast No. 1 Rural District Council ..	1½%
The Belfast No. 2 Rural District Council ..	1½%
The Larne Rural District Council	1%
The Newtownards Rural District Council ..	1%

It will thus be seen that the area of the Port is extensive, the boundary line on the County Antrim shore being 12 miles from Belfast whilst on the County Down shore it is 14 miles from Belfast.

The port of Belfast trades with a very large number of British Commonwealth and Foreign Ports. During the year vessels arrived from the following ports :—Alexandria 2, Antwerp 49, Amsterdam 4, Arzew 2, Arkangel 3, Brest 1, Buenos Ayres 5, Ballina 13, Bahia Blanca 1, Bremerhaven 1, Braila 12, Baltimore 9, Bergen 1, Baton Rouge 3, Boulogne 4, Burrana 1, Bona 2, Borga 1, Bombay 2, Bunbury 1, Beaumont 1, Casablanca 1, Capetown 4, Carholme 1, Castellan 1, Constanza 5, Curacao 3, Danzig 4, Delfzyl 1, Dublin 4, Dunkirk 12, Dungardin 3, Durban 3, Freemantle 1, Flensburg 1, Galway 4, Genoa 1, Cyjon 1, Ghent 50, Gothenberg 29, Halifax 1, Hamburg 56, Havre 5, Hernösand 2, Heulva 2, Jaffa 1, Kemi 4, Kolberg 1, Koningsberg 6, Kotka 1, Krestianstadt 1, La Plata 2, Leghorn 3, Leningrad 5, Le Legne 1, Limerick 4, Los Angeles 1, Malaga 1, Miramichi 3, Montreal 12, New York 18, New Orleans 13, Novorossisk 1, Newcastle, N.B. 1, Naples 1, Passbo 1, Parrsboro 1, Passajas 1, Patras 1, Pernau 1, Philadelphia 1, Peraeus 1, Pomerania 1, Portland, O., 14, Port Lincoln 3, Pugwash 5, Raumo 2, Rangoon 1, Riga 15, Rouen 7, Rosario 20, Rotterdam 57, San Pedro 1, San Nicolas 6, San Francisco 2, Sfax 2, Singapore 1, Skien 1, Soulina 2, Solderhamm 1, St. Johns 5, Sligo 12, Stettin 1, Stugsund 1, Sundsvall 7, Tacoma 1, Tampa 1, Trangsund 3, Trondhjem 1, Uleaborg 2, Valencia 5, Vancouver 3, Waterford 2, Westport 1, Zaandam 1.

The nationality of the vessels which arrived was as follows :—American 39, British 1,557, Danish 9, Dutch 50, German 42, Greek 8, Italian 5, Istonian 1, Japanese 4, Norwegian 16, Roumanian 3, Spanish 3, Swedish 21, Yugo Slav 1.

Table A. Showing the Amount of Shipping entering the Port.

	Number.	Tonnage	Number Inspected		Number of Defects Reported.	Number on which Defects were Remedied.
			By Medical Officer.	By Sanitary Officer.		
Foreign Steamers ..	591	737,256	5	591	231	231
„ Motors ..	..	..	..	..	..	..
„ Sailing ..	..	..	..	..	..	..
„ Fishing ..	..	..	..	..	..	..
Total Foreign ..	591	737,256	5	591	231	231
Coastwise Steamers ..	7,033	2,809,515	4	1,170	408	408
„ Motors ..	..	..	..	..	..	..
„ Sailing ..	7	..	..	..	..	..
„ Fishing ..	..	..	..	..	..	..
Non-Trading Steamers ..	243	128,351	This includes Tugs, Pleasure Boats and	Small Craft.		
„ Sailing ..	1	..				
Total Coastwise ..	7,284	2,938,460	4	1,170	408	408
Total Foreign and Coastwise ..	7,875	3,675,716	9	1,761	639	639

II. Character of Trade of Port.

TABLE B.

(a) Passenger Traffic during the year.

Inward ..	..	..	6,670
Outward ..	..	..	11,870

These figures do not include Cross-Channel services.

The countries from which passengers principally arrive are :—Canada and United States of America. Passengers from Europe and Eastern Countries, etc., come through English and Scottish ports which maintain a nightly service with Belfast, such as Liverpool, Heysham and Glasgow, Ardrossan and Stranraer.

Cargo Traffic.

Principal Imports : Maize, wheat, timber, flax, ores, paper, pulp, cement, hemp, iron and steel, slates, coal, fertilizers, oils, flour, tobacco (leaf), glass, fruit, vegetables, wines.

Principal Exports : Machinery, ropes, linens, yarns, flax, grass seed, potatoes, tobacco, apples, butter, eggs, pork, soap, whiskey, aerated waters.

Countries with which port principally trades : Germany, Holland, Denmark, Sweden, Norway, Latvia, France, Spain, Italy, Belgium, Greece, Egypt, Algiers, Portugal, Canada, United States of America, South America, Australia.

III. Source of Water Supply.

All water used in the docks and supplied to vessels in dock is obtained from hydrants on the quays. The water is supplied by the Belfast and District Water Commissioners. There are no water boats at the port.

IV. Infectious Disease.

Vessels entering the port are hailed by officers of H.M. Customs at the boarding station. If they obtain information of sickness on board a report is sent to the Port Medical Officer of Health. Vessels from "infected ports" or vessels on which infectious disease exists at the time of arrival or has occurred during the voyage are boarded by the Port Medical Officer or Assistant Port Medical Officer. All vessels in dock are visited by the Port Sanitary Officer as soon as possible after berthing, who enquires into the occurrence of any sickness during the voyage and if necessary communicates with the Port Medical Officer. Notifications of arrivals or expected arrival of vessels with sickness on board or vessels requiring special attention are received from H.M. Customs, or the Shipping Companies' Agents. The agents frequently receive the information by wireless, so that all precautions can be taken prior to the arrival of the vessel. All infectious cases are removed by ambulance to Purdysburn Fever Hospital or the Belfast Union Fever Hospital (Smallpox cases to the Smallpox Hospital, Purdysburn).

Contacts of infectious cases if not removed to hospital and living at addresses in the city are kept under observation by the City Sanitary Inspectors. If proceeding to an address outside the City the Medical Officer of Health of the district concerned is notified. The "crew" contacts are visited daily by the Port Sanitary Officer during the stay of the vessel in port and a notification is sent to the next port of call subsequent to the vessel leaving.

The disinfection of the vessel after the removal of an infectious patient is carried out by the Port Sanitary Officer. The infected quarters are sprayed with a 4½% solution of formalin. The clothing, bedding etc., are removed to the disinfecting station, Laganbank Road, for steam disinfection.

Arrangements for Cleansing of Persons.

The cleansing of persons is carried out at the Disinfecting Station, Laganbank Road.

Arrangements for Ambulance Transport.

The motor ambulances attached to the Purdysburn Fever Hospital and the Union Fever Hospital are available for infectious cases. The motor ambulances of the Belfast Corporation are available for non-infectious and accident cases.

Arrangements for detection and treatment of Venereal Disease amongst Sailors.

Enquiries as to the existence of Venereal Disease are made by the Port Sanitary Officer and information given as to the facilities available for the treatment of these diseases to the Masters and Officers of vessels in port. Treatment at the various V.D. clinics is free of cost to the patient.

Arrangements for Bacteriological Examination of Rats.

The bacteriological examination of rats from the port is carried out by the City Bacteriologist at the Municipal Laboratory, Queen's University. During the year 76 rats were examined for possible plague infection. None were found to be infected.

All other Bacteriological examinations for the Port Sanitary Authority are carried out by the City Bacteriologist.

TABLE C.

Cases of Infectious sickness landed from vessels.

Disease.	Number of Cases during the year	Average number of cases for previous 5 years.
Malaria ..	..	1
Chicken Pox ..	1	1
Tuberculosis ..	..	..
Typhoid ..	..	..
Diphtheria ..	2	..
Scarlet ..	2	..
Measles ..	1	..
Pneumonia ..	1	1

TABLE D.

Cases of Infectious sickness occurring on vessels during the voyage but disposed of prior to arrival.

Disease.	Number of Cases during the year.	Average number of cases for previous 5 years.
Influenza ..	2	2
Malaria ..	..	1
Pneumonia ..	..	..
Diphtheria ..	1	..

No case of Plague, Cholera, Yellow Fever, Smallpox or Typhus occurred and no Plague Infected rats were discovered during the year.

Parrots (Prohibition of Import) Regulations.

s.s. "Atlantic City" from Portland O., arrived with two love-birds on board. A Notice under the above regulations was served on the master requiring him to export these birds. One of them subsequently died. A postmortem examination was made by Mr. J. Ewing Johnston, M.B.E., M.R.C.V.S., no trace of Psitticosis being found. The second bird was destroyed at the request of the master by Mr. Johnston who gave a certificate that he had examined these birds and found them free of disease.

s.s. "Invesgoil" arrived from Constanza with two parrots on board. A notice under the above regulations was served on the master prohibiting him from landing these birds, by H.M. Customs and also by the Port Sanitary Authority requiring him to export these birds within a stated time in the notice, otherwise the birds would be destroyed. This was subsequently done by Mr. J. Ewing Johnston, M.B.E., M.R.C.V.S., who gave a certificate that he had destroyed these birds and disposed of them in the furnace.

Measures Against Rodents.

Steps taken for detection of rodent plague : (a) In ships in port. All vessels arriving from ports where plague is endemic are boarded by the Port Sanitary Officer as soon as possible after berthing. Careful enquiries are made as to any evidence of sickness or deaths amongst rats on board during the voyage. The vessels are inspected to ascertain the probable rat population on board and if any sick or dead rats are about.

Traps are set with a view to obtaining samples for bacteriological examination. All such rats are sent to the Municipal Laboratory to be examined by the City Bacteriologist.

(b) On quays, wharves, warehouses etc., instructions are given to owners and employees on quays and warehouses that rats caught by trapping or otherwise should be preserved in air-tight tins for the Port Sanitary Officer who arranges for them to be sent to the Municipal Laboratory for Bacteriological examination.

Measures taken to prevent the passage of rats between ship and shore : Rat guards are affixed to the moorings of all vessels arriving from foreign ports, and continue so fixed during their stay in port. If the rat population on board is estimated to be above the normal, all gangways etc., must be lifted at night.

Methods of Deratisation of Ships.

Deratisation of ships is carried out by fumigation with either Sulphur Dioxide or Hydrocyanic Acid Gas. The fumigations are usually carried out by private firms under the supervision of the Port Sanitary Officer. In fumigating with Sulphur the requisite amounts are placed in the different apartments of the vessel to be fumigated, 3lbs. of sulphur per 1,000 cubic feet of air space and not more than 7 lbs. in each pot or pan. The Sulphur Dioxide is generated by burning the Sulphur. Tinder sticks, wood shavings, saturated with Methylated spirits or paraffin being used to set it alight so as to ensure its complete combustion. The minimum time of exposure is six hours

Fumigation with Hydrocyanic Acid Gas : Two vessels were fumigated with Hydrocyanic Acid Gas during the year. The fumigations were carried out by a Liverpool firm under the supervision of the Port Sanitary Officer. "Zyhlon B" was used, 50 grammes to every 1,000 cubic feet of air space being employed. The fumigations were very satisfactory. The vessels were exposed to the gas for a period of six hours, and after opening up again the vessels were thoroughly ventilated by every means possible to ensure that no gas remained in any part of the vessels.

Methods of deratisation of premises in the vicinity of docks and quays. This is undertaken by the shipping companies, warehousemen and occupiers of premises at the request of the City Sanitary Officers or the Port Sanitary Officer. If necessary, notices are issued under the Rats and Mice Destruction Act, and served on the occupiers of the premises. Cats are kept in many of the stores and warehouses. Trapping is also employed and poison baits laid down.

During the year the Harbour Commissioners had a man employed putting down poisoned baits in the sheds under their jurisdiction.

Rat Proofing : Wharves and warehouses—nearly all the wharves on the County Antrim side of the port are of rat proof construction. The roads, and floors of the sheds, are constructed of Granite square sets, laid on concrete or reinforced concrete. The wharves on the County Down side are mostly used for the discharge of coal and iron and are not rat proof. The offices in the sheds are raised above the floors and constructed so as to be free from rat harbourage.

Action taken to extend rat proofing : The Sanitary Officers see that all stores are kept clean, and when necessary the owners are called upon to do such work as may be found necessary to remove rat harbourage to the minimum. It has not been found necessary to call for any structural alterations for the purpose of rat proofing during the year as the owners and occupiers of premises in the vicinity of the docks are fully aware of this responsibility and readily co-operate in this matter. During the year a number of grain stores were demolished on Dufferin Road, as the site was required in the construction of the New Dock. This was the means of removing a considerable amount of rat harbourage.

TABLE G.

Particulars relating to Plague " Infected " or " Suspected " Vessels arriving in 1930.

Name of Vessel.	Date of Arrival.	Whether " Suspected " or " Infected."	Method of Rat Destruction.	Number of dead Rats recovered.	Whether a Certificate of Deratisation issued.	Remarks.
S.S. " Doric "	..	Suspected " "	..	None.	Had Deratisation Certificate " Deratisation Exemption Certificate issued. Deratisation Certificate issued.	Fumigated at Rosario .. New Vessel.
M.V. " Kheti "	28th March		..	None.		
..	12th April		..	None.		
S.S. " Sea Venture	6th Nov.		..	None.		
S.S. " Marie Victoria	12th Dec.	"	Fumigated S.O.2.	15		

TABLE H.

Measures of Rat Destruction on Vessels from Plague Infected Ports arriving in the port during the year 1930 and number of certificates issued in respect of such vessels.

Total number of Vessels arriving from Plague Infected Ports.	Number of such Vessels fumigated with S.O2.	Number of Rats killed.	Number of Vessels fumigated by H.C.n.	Number of Rats killed.	Number of Vessels on which trapping, Poisoning, &c., were employed.	Number of Rats killed.	Number of such Vessels on which measures of Rat destruction were not carried out.		Number of other Certificates.
							Deratisation.	Exemption.	
39	2	4	None.	None.	None.	None.	36	2	1
									None.

TABLE I.

Measures of Rat Destruction on Vessels (other than those included in Tables G. and H.) and number of certificates issued in respect of such vessels during 1930.

Number of Vessels fumigated by S.O2.	Number of dead Rats recovered.	Number of Vessels fumigated by H.C.n.	Number of dead Rats recovered.	Number of Vessels on which Trapping, Poisoning, &c., were employed.	Number of dead Rats recovered.	Number of Certificates issued on Form Port II.		Number of other Certificates issued.
						Deratisation.	Exemption.	
18	24	2	None. 48 Mice.	3	14	20	34	None.

VI. Hygiene of Crew's Spaces.

TABLE J.

Classification of Nuisances.

Nationality of Vessels.	Number inspected during 1930.	Defects of original construction.	Structural defects through wear and tear.	Dirt Vermin and other conditions prejudicial to health.
British ..	1,557	14	10	540
Other Nations ..	204	3	4	106

VII. Food Inspection.

The most important foodstuffs imported consist of fruit—oranges, lemons, pears, plums, tomatoes, strawberries, raspberries, currants. Dried fruits : currants, raisins, prunes, apricots. Vegetables : lettuce, cauliflower, broccili, onions, carrots. Fish : all kinds, cured and uncured.

During the year the following articles of food were seized as unsound and unfit for food—

			Tons.	Cwts.	Qrs.
321 Crates of Dutch Lettuce .. ..	..	..	3	2	3
1 Roll of Bacon .. ..	..	..	—	—	2
14 Cases of Spanish Tomatoes .. ..	..	..	1	5	—
81 Boxes of Belgian Pears .. ..	..	..	—	18	—
1 Box Fish .. ..	..	..	—	1	2
			5	7	3

Magistrates' orders were obtained for the destruction of the above.

Two samples of Russian Oats were submitted to the City Bacteriologist for examination.

SANITARY REPORT (continued).

DISPENSARY DISTRICT.

	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	XII.	XIII.	XV.	XVI.	TOTAL.
House Drains Cleansed ..	160	295	259	343	192	375	4	11	240	89	185	167	150	303	260	3033
" " Repaired ..	4	21	12	8	2	21	1	..	3	5	11	15	20	6	11	140
Length in feet of Pipe Drain Laid in Providing Houses with New Drains ..	225	658	117	..	..	217	..	86	944	..	91	319	526	..	24	3207
Gully or Disconnecting Traps put on House Drains ..	8	29	9	3	1	7	..	15	21	..	..	2	2	2	2	101
Houses had the Tiling, Paving, or Flooring Repaired ..	200	565	726	362	201	359	10	43	540	499	569	364	158	430	237	5263
Water Closets Erected ..	1	..	1	..	..	..	..	..	..	..	..	..	1	1	..	4
" " Repaired ..	239	510	551	271	155	179	12	15	417	268	315	306	151	302	182	3873
Ashbins Provided ..	69	149	184	96	99	116	16	36	164	183	253	201	146	75	119	1906
Houses Provided with New Sinks ..	1	25	67	..	..	..	1	..	..	1	..	..	1	..	..	96
Houses Provided with New Soil and Ventilation Pipes ..	1	..	2	..	..	..	..	..	5	..	..	1	1	..	..	10
Houses had the Roofs Repaired ..	223	861	914	351	332	395	14	33	628	365	615	367	134	380	267	5879
Houses had the Spouting Repaired ..	214	640	514	268	318	247	15	23	514	307	511	252	117	309	226	4475
Houses Cleansed or White-washed ..	7	27	2	7	6	11	..	1	..	12	5	7	2	37	4	128
Houses had the Yard Walls Lime-washed ..	14	77	28	..	52	..	..	..	..	1	..	..	..	..	..	172
Houses (that were overcrowded) had the Number of Inmates Reduced ..	9	8	6	1	4	..	..	..	1	3	1	1	..	1	2	37
Houses Closed ..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	2
Houses had Minor Repairs Effected ..	452	1202	1284	487	488	432	29	48	1150	639	769	557	268	583	386	8774
Miscellaneous Nuisances Abated ..	52	91	108	289	69	219	2	35	75	123	330	286	245	306	777	3007

TABLE XVI.
INQUEST CASES.

Cause of Death.	Under 1 year.		1 and under 5 years.		5 and under 15 years.		15 and under 25 years.		25 and under 45 years.		45 and under 65 years.		65 and upwards.		Total.		Grand Total.
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Accidents—Motor	..	..	2	..	8	3	4	2	8	1	7	4	5	3	34	13	47
" Other	..	..	1	1	1	..	2	..	5	1	13	2	1	2	23	6	29
Cause "Unknown	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2
Drowning	..	..	..	..	..	..	2	..	2	..	3	..	..	..	7	..	7
Gas Poisoning	..	..	..	..	..	..	..	..	1	1	1	..	1	3	4	6	10
Heart Failure	..	..	..	..	..	..	..	..	2	2	11	2	2	..	13	4	17
Inattention at Birth	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	4	6
Natural Causes	2	4	..	..	..	..	..	..	..	..	9	1	1	..	17	5	22
Overlying	1	1	..	..	..	..	2	..	4	..	..	..	..	..	1	1	2
Poisoning (Acid)	..	..	1	1	..	..	..	..	..	1	..	..	..	..	1	2	3
Septicaemia	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
Shock due to Burns, etc.	..	3	4	7	1	2	..	2	1	3	..	..	..	1	6	18	24
Stillborn	..	1	..	..	..	..	..	..	..	..	1	..	..	..	1	1	2
Suffocation	1	1	..	..	..	..	..	..	..	..	1	..	..	..	2	1	3
Suicide	..	..	..	..	..	..	1	..	9	1	14	1	1	..	25	2	27
	8	12	8	9	10	5	12	4	30	13	59	12	11	9	138	64	202

CITY AND COUNTY BOROUGH OF BELFAST.

TUBERCULOSIS DEPARTMENT.

THE YEAR'S WORK,

BEING

THE REPORT

OF THE

Chief Tuberculosis Officer

FOR THE

Year Ended 31st December, 1930.

MEMBERS OF THE TUBERCULOSIS COMMITTEE (1930).

The Right Honourable SIR WILLIAM COATES, Bart., P.C., D.L., J.P.
Lord Mayor.

Councillor HUGH McKIBBIN, Chairman (Died 8/11/30).

Councillor W. A. COCHRANE, J.P. Chairman (from 26/11/30).

Alderman Mrs. McMORDIE, C.B.E., J.P., Deputy Chairman (Resigned 29/4/30).

Councillor CLARKE SCOTT, Deputy Chairman.

Alderman W. H. ALEXANDER.

Alderman ROBERT PIERCE.

Alderman CAPTAIN W. REID, J.P.

Alderman J. D. WILLIAMSON, M.D., J.P.

Councillor J. BOYLE.

Councillor W. F. CLOKEY (Deceased).

Councillor MRS. COLEMAN.

Councillor Lt.-Com. R. M. HARCOURT.

Councillor M. HOPKINS, J.P.

Councillor H. M'LAURIN, J.P.

Councillor W. P. NOBLE.

Councillor W. SWEENEY.

MR. WILLIAM MOOREHEAD (Deceased)

(Chairman Belfast Insurance Committee).

MR. KYLE M. ALEXANDER, F.L.A.A.

(Member Belfast Insurance Committee).

MR. JAMES PARKHILL, J.P.

(Member Belfast Insurance Committee).

MEDICAL OFFICERS OF THE DEPARTMENT.**Tuberculosis Institutes.**

Chief Tuberculosis Officer	..	DR. ANDREW TRIMBLE.
Assistant Medical Officer	..	DR. JAMES SHAW.
Assistant Medical Officer	..	DR. T. R. V. IRWIN.
Assistant Medical Officer	..	DR. HERBERT M'MASTER.
Assistant Medical Officer	..	DR. E. P. DEWAR.

Municipal Sanatorium, Whiteabbey.

Resident Medical Superintendent	..	DR. PERCY S. WALKER.
Assistant Medical Officers	..	DR. D. K. WATTERSON.
		DR. MARGARET H. ELLIOTT (Resigned).
		DR. A. E. LAVELLE.
Visiting Medical Officer	..	DR. JOHN RANKIN.

Municipal Hospital for Tuberculous Children, Graymount.

Visiting Surgeon	..	MR. H. P. MALCOLM.
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CHART 1.

SHOWING THE COURSE OF THE DEATH RATE FROM PULMONARY TUBERCULOSIS
IN BELFAST FROM 1895 ONWARD, AND FROM THE NON-PULMONARY FORMS OF
TUBERCULOSIS, FROM 1906 ONWARD.



REPORT OF THE CHIEF TUBERCULOSIS OFFICER

ON THE WORK OF

THE TUBERCULOSIS DEPARTMENT

For the Year ending 31st December, 1930.

SUBMITTED TO THE MEDICAL SUPERINTENDENT OFFICER OF HEALTH, THROUGH
THE CHAIRMAN AND MEMBERS OF THE TUBERCULOSIS COMMITTEE.

Ladies and Gentlemen,

I beg to submit herewith my report of the work done in connection with the Tuberculosis Institutes during the year ended 31st December, 1930.

My first duty is to thank the Tuberculosis Committee for the continued interest and support which they have given me in carrying through the work of the Department ; and the Medical, Nursing and Clerical Staffs for their loyal assistance throughout the year.

I wish also to acknowledge the courtesy and sympathetic consideration which Dr. C. S. Thomson, Medical Superintendent Officer of Health, has at all times extended to me, and the personal interest which he takes in the Scheme of the Corporation for the Prevention and Treatment of Tuberculosis.

The Department owes a debt to the Belfast Council of Social Welfare, and to their capable Secretary, Miss McCrea, for valuable assistance extended to patients in necessitous circumstances, on many occasions during the year. The British Legion have also assisted materially in relieving distress amongst discharged service men and their families.

To the Belfast Poor Law Guardians, and their efficient and courteous Staff, I tender my very sincere thanks for their unfailing help, both in relieving distress and in receiving for urgent treatment patients whom it was impossible to admit at once to the Corporation's Institutions.

CALCULATION OF RATES.

Throughout this Report, the various rates are calculated on the census figures of 1926, as the Registrar General does not now issue "estimated" figures for each succeeding year. The actual population figures on which the rates in this Report are based are, therefore, 195,539 males and 218,612 females.

NEW EXAMINATIONS.

Table 1.—Shows the number of persons examined for the first time, in each of the years indicated, without regard to sex or diagnosis.

Year ended				Number of Examinations.
31st December, 1928	..	..	..	1816
31st December, 1929	..	..	..	1805
31st December, 1930	..	..	..	1638

Table 2.—Shows the result of examination of new patients examined during the years indicated.

Year ended		Tuberculous	Suspect	Non-Tuberculous	Total
31st December, 1928	..	1100	117	745	1962
31st December, 1929	..	1032	117	770	1919
31st December, 1930	..	881	120	724	1725*
Percentages for year ended					
31st December, 1930	..	51%	7%	42%	100%

*Includes 88 transfers from patients formerly only suspect, to tuberculous or non-tuberculous.

The figures set out above show a decrease of 150 in the numbers found to be suffering from tuberculosis, as compared with the year 1929.

CONTACTS.

Table 3.—Shows the number and result of examination of Contacts set out as Tuberculous, “Suspect,” and Non-Tuberculous.

		Tuberculous	Suspect	Non-Tuberculous	Total
No.	..	103	23	290	416
Per Cent.	..	25%	5%	70%	100%

With reference to the percentage of contacts (all ages) found to be tuberculous, it may be well to state that almost all the contacts examined had been previously noticed to be ailing, either by the parent, or by the visiting nurse.

SPECIFIC FORMS OF TUBERCULOSIS.

Table 4.—Shows the form of tuberculosis from which each tuberculous patient was found to be suffering, and the sex of the patient so suffering, including old patients formerly “suspect,” whose diagnosis was made definite during the year.

Year ended	Pulmonary		Glandular		Osseous		Abdominal		Other Forms		Total		Grand Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
31st Dec., 1928 ..	351	401	119	103	34	21	25	20	13	13	542	558	1100
31st Dec., 1929 ..	344	390	79	46	34	37	28	28	26	20	511	521	1032
31st Dec., 1930 ..	270	332	61	52	29	33	29	15	32	28	421	460	881

A study of the relative numbers of women and men found to be tuberculous at their first examination reveals a diminution in the relative numbers of women, during the 17 years of our work. Thus for every 100 men found to be suffering from tuberculosis in the year 1916 we had 135 women similarly affected ; but for every 100 men diagnosed as suffering from tuberculosis during 1930 we had only 109 tuberculous women. This is in accordance with the almost universal experience that as conditions of living improve, deaths from tuberculosis amongst women approach near to, or fall under, those amongst men. We have not yet arrived at that stage in Belfast, since the tuberculous deaths amongst women are still higher than those amongst men, contrary to the general experience in Great Britain, and America.

RE-ATTENDANCES OF OLD PATIENTS.

The re-attendances of old patients at the Institutes for examination and treatment numbered 27,897 as compared with 32,449 in the year previous. 127 patients unable to attend the Institutes were re-examined in their own homes, and 38 patients were examined at the Belfast Infirmary by the Medical Staff of the Institutes.

PATIENTS ON THE VARIOUS FORMS OF TREATMENT.

Table 5.—Shows the number of patients on the different forms of treatment at the 31st of December, 1930.

Institute (Dispensary)	Domiciliary		Institutional		Open-Air School (Day Section)	Total
	Ins.	Non- Ins.	Sana- torium.	Graymount Hospital		
1780	1806	997	209	58	120	4970

The importance of these figures does not consist merely in the fact that so many patients are under treatment, but that every patient treated is an object lesson to the remainder of the family and the community—serving as a starting point for a spread of the knowledge of the laws of health and of the means that may be utilised for the prevention of disease.

RE-EXAMINATION OF PATIENTS ON DOMICILIARY TREATMENT.

In addition to the quarterly reports of Domiciliary Doctors regarding tuberculous patients under their care, a special re-examination of patients on Domiciliary treatment is made at regular intervals by the medical staff of the Institutes. During the year 1930, 885 such re-examinations were made, with the results set out hereunder :—

Table 6.—Shows the Condition of Domiciliary patients re-examined during the year.

Year	Disease Apparently Cured	Disease Quiescent.	Greatly Improved.	Improved	In Statu Quo.	Worse	Total
1928	79	110	69	168	455	82	963
1929	51	75	64	156	483	92	921
1930	37	92	82	117	483	74	885

If these results can be accomplished in face of all the disabilities connected with overcrowding, inadequate housing and unemployment, much more might be accomplished if social conditions were what they should be ; if the importance of attention to early symptoms were realised ; and if the patients were more amenable to advice and faithfully carried out the instructions of the doctor in regard to rest especially in the early stages of the disease.

Table 7.

Occupations of Tuberculous Patients at their First Examination (arranged according to the Classification—Slightly Modified—of the Registrar-General).

I.—GENERAL OR LOCAL GOVERNMENT OF THE COUNTRY.

Male.
Nil.

Female.
Nil.

II.—PERSONS ENGAGED IN THE DEFENCE OF THE COUNTRY.

Male.			Female.
Policeman	..	1	Nil.
Sailor (Discharged)	..	1	Nil.
Soldier (Discharged)	..	36	

III.—PERSONS ENGAGED IN PROFESSIONAL OCCUPATIONS (AND THEIR SUBORDINATES).

Cinema Operator	..	1	Music Teacher	..	1
Salvation Army Officer	..	2	Photographer	..	1
Student	..	1			

IV.—PERSONS ENGAGED IN DOMESTIC OR PERSONAL OFFICES OR SERVICES.

Barber	..	1	Charwoman	..	3
Hairdresser	..	1	Companion	..	1
Hospital Attendant	..	1	General Servant	..	14
Window Cleaner	..	3			

V.—PERSONS ENGAGED IN COMMERCIAL OCCUPATIONS.

Chemist	..	1	Canvasser	..	1
Clerk	..	16	Clerk	..	8
Shop Assistant	..	9	Shop Girl	..	10
Traveller	..	3			

VI.—CONVEYANCE OF MEN, GOODS, MESSAGES.

Bus Conductor	..	2			
Carter	..	5	Nil.		
Coal Man	..	1			
Engine Cleaner	..	1			
Messenger	..	8			
Motor Man	..	4			
Newsboy	..	1			
Porter	..	2			
Signal Man	..	1			

VII.—PERSONS ENGAGED IN AGRICULTURE.

Nil. Nil.

VIII.—PERSONS ENGAGED ABOUT ANIMALS.

Nil. Nil.

IX.—PERSONS WORKING OR DEALING IN PRINTING, BOOKS, ETC.

Gilder	..	1	Bookfolder	..	1
Letter Cutter	..	2			
Printer	..	2			

X.—PERSONS ENGAGED WITH MACHINES AND IMPLEMENTS.

Boiler Maker	..	1	Cager	..	1
Cager	..	2	Driller	..	1
Caulker	..	1	Patent Turner	..	1
Crane Driver	..	3			
Driller	..	3			
Engineer	..	9			
Fireman	..	2			
Heater Boy	..	1			
Heckle Setter	..	1			
Holder Up	..	1			
Iron Moulder	..	1			
Iron Turner	..	1			
Oiler	..	1			
Plater	..	1			
Plumber	..	3			
Riveter	..	3			
Shipwright	..	1			
Stager	..	2			

XI.—PERSONS WORKING AT HOUSES, FURNITURE AND DECORATIONS.

Male.			Female.		
Basket Maker	..	1	Upholstress	..	2
Bricklayer	..	2			
Cabinet Maker	..	1			
Carpenter	..	10			
French Polisher	..	1			
Painter and Glazier	..	2			
Plasterer	..	1			
Sawyer	..	1			
Stone Mason	..	1			
Upholsterer	..	1			

XII.—CARRIAGES AND HARNESS.

Coachbuilder	..	1	Nil.		
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XIII.—SHIPS AND BOATS...

(See also under X.—“Machines and Implements.”)

XIV.—CHEMICALS AND COMPOUNDS.

Nil.			Nil.		
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XV.—TOBACCO AND PIPES.

Tobacco Worker	..	1	Tobacco Worker	..	5
----------------	----	---	----------------	----	---

XVI.—FOOD AND LODGINGS.

Bacon Curer	..	1	Grocer's Assistant	..	1
Baker	..	3	Waitress	..	5
Barman	..	4			
Bottle Washer	..	1			
Bread Server	..	1			
Chef	..	1			
Confectioner	..	1			
Milk Server	..	1			
Poultry Rearer	..	1			

XVII.—TEXTILE FABRICS.

Bobbin Turner	..	1	Bobbin Sorter	..	1
Flax Dresser	..	1	Carder	..	1
Machinist	..	3	Doffer	..	12
Millworker	..	2	Drawer	..	3
Packer	..	2	Examiner	..	1
Packing Case Maker	..	1	Felt Machine Feeder	..	1
Rougher	..	3	Flax Driver	..	1
Tenter	..	1	Invisible Mender	..	1
Warehouse Worker	..	1	Laundress	..	8
Weaver	..	1	Layer	..	4
			Machinist	..	3
			Ornamentor	..	4
			Packer	..	4
			Preparer (Textile)	..	1
			Presser	..	1
			Reeler	..	9
			Ropeworker	..	2
			Rover	..	3
			Spinner	..	20
			Stitcher	..	24
			Wareroom Worker	..	1
			Weaver	..	32
			Winder	..	8
			Factory Worker or Mill-worker (not otherwise defined)	..	10

XVIII.—DRESS, ETC.

Male.		Female.	
Boot and Shoe Maker	.. 3	Dressmaker	.. 1
Cutter	.. 2	Tailoress	.. 2
Tailor	.. 2		

XIX., XX., and XXI.—ANIMAL, VEGETABLE, AND MINERAL SUBSTANCES.

Nil.

Nil.

XXII.—GENERAL OR UNSPECIFIED COMMODITIES.

Dealer	.. 4	Dealer	.. 2
Labourer	.. 73	Housewife	.. 100
Lamplighter	.. 2		
Nightwatchman	.. 1		
Storeman	.. 3		

XXIII.—REFUSE MATTERS.

Nil.

Nil.

XXIV.—PERSONS NOT PRODUCING.

School Boy	.. 127	School Girl	.. 99
Male Child under School Age	.. 35	Female Child under School Age	.. 28
No occupation	.. 9	No occupation	.. 17
Total Males	.. 458	Total Females	.. 460

N.B.—36 Discharged Sailors and Soldiers are recorded also under their ordinary calling.

THE QUESTION OF INFECTION.

Table 8.—Shows the possibility of infection by living, or having lived, with other tuberculous persons.

Year ended	Number of Patients who are living, or have lived, with one or more definitely tuberculous persons.							Total
	With 1	With 2	With 3	With 4	With 5	With 6	With over 6	
31st Dec., 1928	250	71	17	4	4	0	1	347
31st Dec., 1929	219	82	24	12	0	0	1	338
31st Dec., 1930.	167	45	21	5	3	2	0	243

The possibility of infection is strongly suggested by a study of the foregoing Table. Thus, of 881 patients examined during the year and found to be suffering from tuberculosis, 27 per cent. had a definite opportunity of infection through living in contact with other tuberculous patients.

Here I would again emphasise the fact that the primary source of infection in tuberculosis is the tubercle bacillus in the sputum or other discharge of the tuberculous patient. If this infected sputum or discharge is not carefully disposed of, or if proper care is not taken to cleanse thoroughly the knives, forks, plates, spoons, etc., used by the tuberculous patient, the results are certain to be disastrous—especially to the children of the family.

VISITING THE PATIENTS IN THEIR HOMES.

During the year our Staff of Visiting Nurses paid 32,934 visits to patients in their own homes.

As demonstrating the crowded conditions in which some of our patients live, the following Tables will be of interest :—

HOME CONDITIONS.

Table 9.—Shows the number of rooms in domiciles occupied by tuberculous patients at their first examination

Year Ended	Rooms in Domicile	One	Two	Three	Four	Five	Six	Seven	Over Seven	Total
31st Dec., 1928	Patients	40	75	183	518	78	36	6	—	936
31st Dec., 1929		38	69	144	419	60	51	12	7	800
31st Dec., 1930		29	40	97	389	59	49	8	1	672

HOME CONDITIONS AT THE FIRST VISIT OF THE NURSE.

Table 10.—Shows the conditions of the homes of the new patients examined during the year, on the first visit of the Nurse.

Year Ended	Excep. Good	Very Good	Good	Average	Bad	Very Bad	Excep. Bad	Total
31st Dec., 1928	0	21	111	614	112	62	16	936
31st Dec., 1929	6	17	107	493	106	50	21	800
31st Dec., 1930	7	25	121	413	76	25	5	672

The decision as to which of the above headings the condition of the home shall be placed under, has been arrived at after careful consideration of the number of inmates in the house, its cleanliness, ventilation, etc. It is gratifying to observe that, for the first time since the shortage of houses became acute, the numbers classified as Exceptionally Good, Very Good, and Good, have increased, whilst the numbers classified as Bad, Very Bad, and Exceptionally Bad have diminished.

PERSONS IN THE SAME BEDROOM AS THE PATIENT.

Table 11.—Shows the number of tuberculous patients sleeping in the **same bedroom** with other persons, as ascertained at the first visit of the nurse.

Year ended	Alone	With 1 other	With 2 others	With 3 others	With 4 others	With 5 others	With 6 others	With 7 others or over	Total
31st Dec., 1928	160	299	220	157	59	24	12	5	936
31st Dec., 1929	165	264	185	110	42	15	8	11	800
31st Dec., 1930	141	251	150	85	28	13	2	2	672

PERSONS IN THE SAME BED WITH THE PATIENT.

Table 12.—Shows the number of tuberculous patients sleeping in the **same bed** with the undermentioned numbers of other persons, as ascertained at the first visit of the nurse.

Year ended	Alone	With 1 other	With 2 others	With 3 others	With 4 others	With 5 others or over	Total
31st Dec., 1928	243	405	202	67	16	3	936
31st Dec., 1929	228	342	161	54	13	2	800
31st Dec., 1930.	198	305	129	33	7	0	672

In the lower percentages of patients sleeping with three, four, or more, persons in the same bedrooms and beds, I think we are again justified in detecting the early signs of an improvement in the housing conditions of the people. If this improvement be maintained, the solution of the problem of tuberculosis will be brought a step nearer.

SPITTING.

The spread of infection within the house is bad enough, and sometimes inevitable, but there is no excuse for the offensive habit of spitting in streets and public conveyances, where it is liable to be dried and carried into the air or conveyed by the feet of the passer-by into the homes of the people.

From personal observation, I feel apprehensive that this ugly and offensive habit is on the increase. Every person who values his own health and that of the community should regard it as his duty to draw the attention of Guards, Bus Conductors, Tram Conductors, and other responsible public servants to any person seen spitting in a public conveyance, and it is to be hoped that such offenders will not be allowed to escape the penalty of the law with a mere "caution!"

It should be recognised that spitting is a habit which offends against the most elementary standard of cleanliness, decency and good manners.

WHERE THE PATIENTS LIVE.

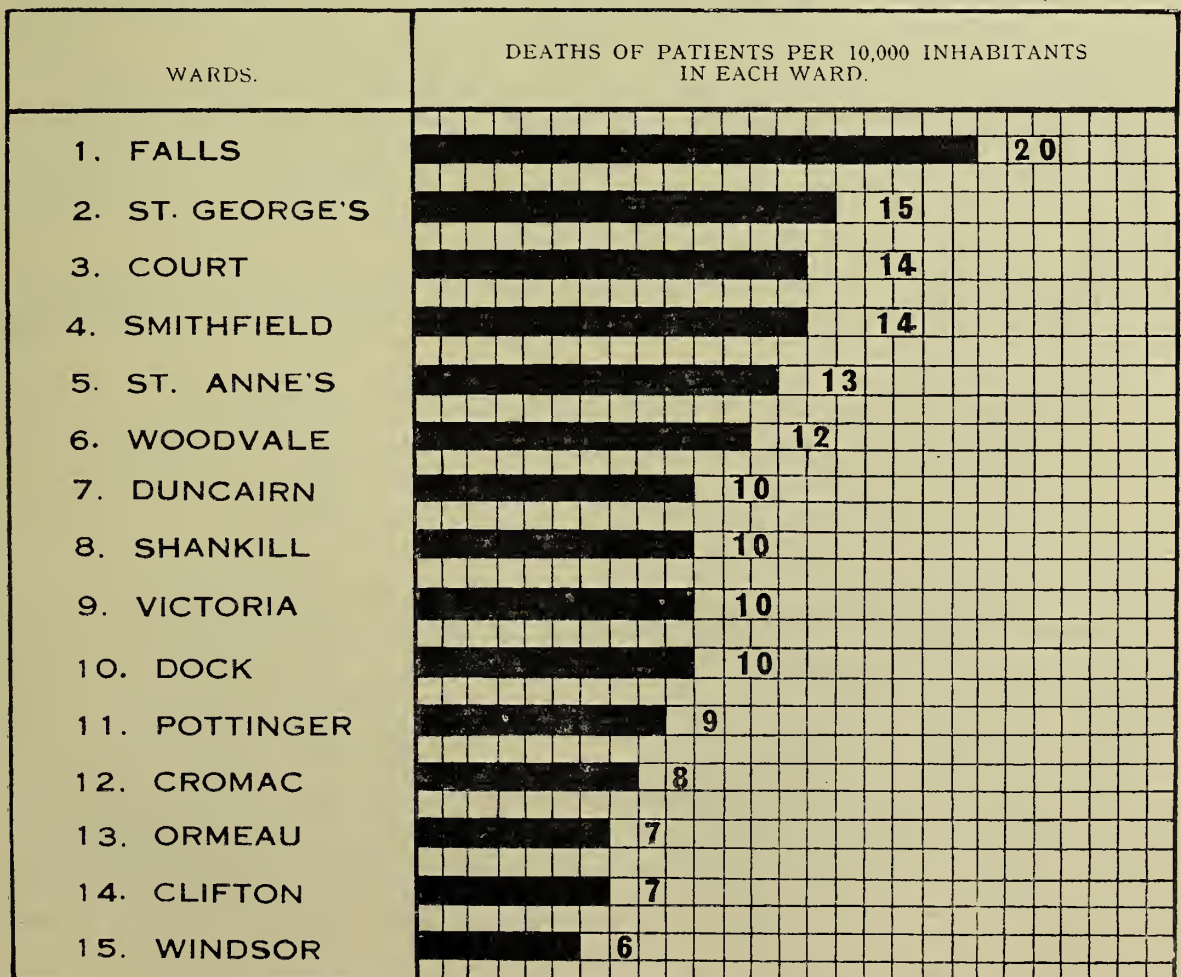
Table 13.—Indicates by wards, arranged in alphabetical order, the localities in which new tuberculous patients lived, at the time of their first examination.

Clifton	61	St. George's	46
Court	46	Shankill	71
Cromac	37	Smithfield	42
Dock	54	Victoria	66
Duncairn	61	Windsor	37
Falls	72	Woodvale	59
Ormeau	67		
Pottinger	90	Total	881
St. Anne's	72		

With this Table showing the localities in which the **patients live**, or were living at their first examination, it is interesting to compare the accompanying Chart, which sets out graphically the wards in which **deaths** from pulmonary tuberculosis took place during the year 1930.

CHART 2.

SHOWS THE DEATHS FROM PULMONARY TUBERCULOSIS AS A RATE PER 10,000 INHABITANTS, LIVING IN THE WARDS IN WHICH THE DEATH OCCURRED (1930).



X-RAY DEPARTMENT.

During the year we exposed 192 X-ray films, of which 189 were exposed as a help towards diagnosis of disease in the lungs, and 33 in connection with the work at the Municipal Hospital for Tuberculous Children, Graymount.

ARTIFICIAL LIGHT DEPARTMENT.

At both Institutes the use of artificial light has been further developed during the year with good results, especially amongst delicate children, and those suffering from osseous and glandular tuberculosis, lupus, etc.

Table 14.—Shows the number of Light Treatments administered during the year :—

Institute.	Treatments Given.				Total
	Carbon Arc	Mercury Vapour	Kromayer	Sollux	
Central ..	2609	79	44	179	2911
A.B. Road ..	—	3253	—	—	3253
	2609	3332	44	179	6164

DENTAL DEPARTMENT.

This Department under the supervision of Mr. Osborne Black, continues to be increasingly patronised, and patients derive much benefit from the dental treatment provided.

Table 15.—Shows the nature and amount of the dental work carried out for patients during the year ended 31st December, 1930.

Institute	Fillings	Scalings	Dressings	Extractions	Total Treatments
Central ..	93	9	174	219	495
A.B. Road ..	139	3	276	188	606
Graymount ..	266	—	487	64	817
Total ..	498	12	937	471	1918

LABORATORY WORK.

Table 16.—Shows the nature and amount of the laboratory work done during the year.

Year ended	Examinations.			Tuberculins prepared
	Sputa	Chemical	Haematological	
31st Dec., 1930 ..	727	776	293	57

Table 17.—Shows the result of examinations of sputa for tubercle bacilli and albumin or albumose.

T.B. + Alb. +	T.B. + Alb. —	T.B. — Alb., —	T.B. — Alb. +
169	9	475	74

A consideration of the foregoing Table shows how rarely albumin is absent when the sputum contains tubercle bacilli, and how constant is the presence of albumin in sputum positive to T.B. In all probability the presence of albumin is due to cytolysis, and if the tubercular lesion is active, it is reasonable to expect albumin to be present in the sputum. It would seem, therefore, that the presence of albumin in sputum negative to tubercle bacilli should be regarded as a significant suggestion for frequent examination of the sputum, in order to avoid the risk of missing the intermittent presence of tubercle bacilli.

PREGNANCY AND TUBERCULOSIS.

Regarding the effects of pregnancy on tuberculosis and of tuberculosis on pregnancy, I have made recent enquiry into the results of pregnancy in 1,113 tuberculous mothers, and the results are set out hereunder :—

Table 18.—Shows the end results of pregnancy in 1,113 tuberculous mothers :—

	Miscarried	Delivered of—			Total
		Living Full-term child	Premature child	Deadborn child	
No.	63	1020	13	17	1113
Percentage	5.6%	91.6%	1.2%	1.6%	100%

Table 19.—Shows the condition since delivery of a group of tuberculous mothers under the care of the Tuberculosis Department.

Improved	In Statu Quo	Worse	Died within a year of delivery.
342 24.5%	725 51.9%	271 19.4%	59 4.2%

With regard to the condition of children born of tuberculous mothers : we have kept records of the condition of 926 children born of 410 tuberculous mothers over a period of about seven years. All these children were born since the mothers were diagnosed tuberculous, and the reports on their health at the end of the year 1930 were as follows :—

Table 20.—Shows the condition of 926 children born of 410 Tuberculous mothers.

	Healthy	Delicate	Tuberculous	Dead	Total
No. Per Cent.	674 72.8%	91 9.8%	25 2.7%	136 14.7%	926 100%

If, instead of considering the percentage death rate over a period of seven years, we take into consideration the Infantile Mortality rate, that is, the deaths of children under one year, we find that the children born of tuberculous mothers had an infantile mortality rate of 93 per thousand, as compared with an average of 102 per thousand amongst children in the general population during the same period. Strange as this may appear, it agrees with the observations of the Tuberculosis Officers of the County of Lancashire and the City of Leeds, and is, in all probability, due to the supervision of the visiting nurses in the homes of tuberculous mothers, and is a direct result of their campaign for fresh air, cleanliness, suitable feeding, etc.

MUNICIPAL SANATORIUM.

For a detailed account of the work at the Municipal Sanatorium, Whiteabbey, reference should be made to the Report of the Resident Medical Superintendent, Dr. P. S. Walker.

GRAYMOUNT HOSPITAL.

For details of the work carried on at this Institution reference should be made to the Report of the Visiting Surgeon, Mr. H. P. Malcolm.

GRAYMOUNT OPEN-AIR SCHOOL.

The Open-Air School divided into Day and Hospital Sections, under the supervision of Miss Thompson and her four assistants, continues to fulfil a most important function.

I think it well to make it plain that the children attending the open-air school (day section) are not themselves actually suffering from clinical tuberculosis, though they are living in daily association with parents or relatives suffering from the disease, and it is hoped that the good food, fresh air, mid-day rest, and general training in habits of cleanliness will go far to cut down the bridges to infection in the home, and to increase bodily resistance to the disease.

The average daily attendance at the School during the year was as under :—

Day Section	..	..	..	102.1
Hospital Section	..	..	..	36.0
Total daily average at both Sections			..	138.1
Average on Rolls at 31/12/30	..		..	155.0

The School is so popular that the demands for admission are far in excess of the accommodation. In addition to our own requirement, those of the School Medical Officer (Dr. T. S. Fulton) would easily provide pupils for several more such schools.

It is gratifying to notice the commodious and well built schools which are now being erected by the Education Authority, and, in my opinion, if these were constructed on a plan which would make them easily convertible into schools of the open-air type, generously provided with facilities for personal cleanliness and sanitary accommodation, they would go far to foster and protect the health of school children. The school years are the most important in the whole life of an individual, and during these years the foundations of health may be either strengthened, or sapped, and habits of mind and body formed which may conduce either to the happiness or the misery of the individual throughout his whole after-lifetime.

Table 21.—Shows the results of new examinations during the year 1930 of children aged 14 years and under sent to us by the School Medical Officers, the city Doctors, and the Visiting Nurses “as contacts” of tuberculous patients :—

NOTIFIED BY	..	..	PULM	HILAR	NON PULM.	SUSPECT	NON-TBR.	TOTAL
S.M.O.	..	..	9 7.8%	7 6.0%	14 12.0%	7 6.0%	79 68.2%	116
CITY DOCTORS	..	..	55 12.0%	44 9.6%	107 23.4%	26 5.7%	225 49.2%	457
CONTACTS	..	..	3 1.6%	14 7.0%	14 7.0%	5 2.5%	162 81.9%	198
TOTAL	..	..	67 8.7%	65 8.4%	135 17.5%	38 4.9%	466 60.5%	771

N.B.—A consideration of the above table will show that the incidence of pulmonary tuberculosis amongst children under 14 years of age is much below the incidence of the same form of tuberculosis during the adult years of life. On the other hand, the incidence of hilar (glandular at roots of lungs) and non-pulmonary forms is much higher than in later life—as revealed by the death returns.

In accordance with a request from the Ministry of Home Affairs, the following particulars are set out hereunder :—

Hospitals provided by the Sanitary Authority or the
County Council.

B. Tuberculosis—

Hospitals.

1. Municipal Hospital for Tuberculous Children, Graymount, Belfast. (For the treatment of osseous tuberculosis in children) 58 beds
2. Municipal Sanatorium, Whiteabbey, Co. Antrim. (For all forms of tuberculosis in children and adults). 285 beds

Clinics and Treatment Centres.

1. Central Tuberculosis Institute, Durham Street, Belfast.
2. Tuberculosis Institute, 225 Albertbridge Road (Branch).
3. Open-Air School—Day Section—Graymount, Belfast 110 places

Artificial Light Clinics for tubercular diseases.

1. At Central Tuberculosis Institute, Durham Street, Belfast.
2. At Tuberculosis Institute, 225 Albertbridge Road, Belfast.

TABLE 22

NEW CASES AND MORTALITY DURING 1930.

Age—Periods	New Cases		DEATHS *			
	All Forms of Tbs.		Pulmonary		Non-Pulmonary	
	M.	F.	M.	F.	M.	F.
0-4 incl.	31	16	5	5	18	18
5-9 "	82	72	2	2	6	5
10-14 "	54	48	2	4	4	4
15-19 "	47	54	24	29	7	7
20-24 "	48	73	39	48	9	5
25-34 "	72	105	59	54	5	4
35-44 "	48	42	30	32	4	7
45-54 "	18	32	29	24	6	5
55 and upwards	21	18	24	28	2	3
Total ..	421	460	214	226	61	58

*These figures are compiled from the Returns of deaths occurring in the city submitted by District Registrars to the M.S.O.H. and are subject to correction by the Registrar General.

The ratio of non-notified tuberculosis deaths to the total tuberculosis deaths was as 1 : 3.

It is evident, therefore, that the ratio of notified tuberculosis patients to deaths from tuberculosis still leaves a good deal to be desired. It must not be assumed, however, that this lack of notification is due entirely to laxity on the part of medical practitioners attending the non-notified cases. The Regulations specifying the conditions under which a patient suffering from tuberculosis shall be notified to the Medical Officer of Health often leave the practitioner in doubt as to whether a particular case is notifiable. In my opinion, **all cases of tuberculosis should be notified** as soon as the Doctor becomes aware that the patient is suffering from the disease—in whatever form, and at whatever stage. This is all the more desirable since the Regulations made under the National Health

Insurance Act (1930) make it compulsory that the Panel Doctor shall notify the Chief Tuberculosis Officer as soon as he **becomes aware, or suspects** that an Insured Person is suffering from tuberculosis. It would seem reasonable, therefore, that the Regulations regarding the notification of tuberculosis should not differ as between Insured and non-Insured Persons, nor as between two Ministries of the same Government.

LOST MEDICAL OPPORTUNITIES.

For many years past I have observed that much valuable clinical material is annually lost to students of medicine through the fact that tuberculosis—and more especially pulmonary tuberculosis—is not treated for any length of time in general hospitals. With the exception of a few students who find their way, almost by accident, to the Tuberculosis Institutes, little or no use is made of the valuable opportunities there presented of becoming acquainted with the diagnosis and treatment of tuberculosis—a disease that claims over ten per cent. of all deaths, and judging (from the chronicity of the disease) a much larger percentage of the sickness, in the community.

As evidence of the value of the opportunities (in clinical material) available at the Tuberculosis Institutes, I may mention that Mr. George Neill, a 4th year medical student, who attended at this Institute for a short course of instruction, carried off with another medical student a joint prize presented by the British Medical Association for a paper on the subject—“Describe and discuss cases illustrating modern methods of the diagnosis of early pulmonary tuberculosis.” The success of these students is all the more remarkable in that the prize was open to students of Queen’s University, Belfast, Trinity College, Dublin, the National University of Ireland (University College, Cork, University College, Dublin, and University College, Galway), and the Royal College of Surgeons in Ireland.

It is the business of the shepherd to lead his flock to green pastures, and not to allow them to be satisfied with the well-cropped herbage on the arid slopes of Parnassus!

THE COMING OF MEDICAL BENEFIT.

After surmounting many difficulties, the Minister of Labour on behalf of the Government introduced during the year, the National Health Insurance Act (N.I.) 1930. The Act which deals principally with the provision of Medical Benefit for Insured Persons, came into operation on the 1st October, 1930. This measure, which I have advocated in my Annual Reports on many occasions, will, in my opinion, have far-reaching and beneficent effects in preventing the development of disease, and, generally, in promoting the health of the people. Amongst other administrative changes, the Act provided for the dissolution of Insurance Committees; a fact which I cannot allow to pass without expressing regret at the severance of official connection with the Belfast Insurance Committee and their staff who always extended to our work the warmest encouragement and sympathy. Nor can we forget their many financial contributions towards medical equipment over and above the legal payments provided for under their Agreement with the Belfast Corporation.

So far as the notification, examination and treatment of patients are concerned there will be little alteration as compared with arrangements in force prior to the introduction of the Act, as will be seen by the following extract from the 1st Schedule to the Medical Benefit Regulations made under the Act:—

“Reports to Tuberculosis Officer.

“47. A practitioner is required—

“(a) To prepare and send to the Tuberculosis Officer a report on a form
“to be provided by the Tuberculosis Officer and approved by
“the Ministry for the purpose (i) in regard to each patient whom

- “ the practitioner finds or suspects to be suffering from tuberculosis
 “ such report to be furnished as soon as the practitioner becomes
 “ aware, or has reason to suspect, that the patient is suffering from
 “ tuberculosis, and (ii) in regard to each patient in respect of whom
 “ the Tuberculosis Officer requests the practitioner to furnish such
 “ a report, not being a patient in respect of whom the practitioner
 “ has already furnished a report under (i) above.
- “ (b) To prepare and send to the Tuberculosis Officer in regard to each
 “ patient who is recommended by the Tuberculosis Officer to receive
 “ treatment for tuberculosis from the practitioner reports on forms
 “ to be provided by the Tuberculosis Officer and approved by the
 “ Ministry for the purpose, at such reasonable intervals, not exceeding
 “ three months, during the continuance of such treatment as may be
 “ arranged between the practitioner and the Tuberculosis Officer ;
- “ (c) To prepare and send to the Tuberculosis Officer an immediate
 “ report of any serious change in the condition of a patient in respect
 “ of whom reports are being made under sub-paragraph (b) ;
- “ (d) When he attends in an emergency a patient who is suffering
 “ from tuberculosis, but who has not been recommended by the
 “ Tuberculosis Officer to receive treatment from the practitioner
 “ and the emergency relates to the tuberculosis from which the
 “ patient is suffering, or affects the treatment of that disease, to
 “ inform the Tuberculosis Officer of the emergency, and of the
 “ nature of the treatment afforded ;
- “ (e) To confer with the Tuberculosis Officer at such times, and in
 “ such circumstances as may be arranged between them in regard
 “ to patients suffering from tuberculosis ; and
- “ (f) To report promptly to the Tuberculosis Officer the death and
 “ cause of death of any patient in respect of whom reports are
 “ being made under sub-paragraph (b).”

It will thus be seen that so far as the Regulations are concerned, every provision is made to ensure that this Department will get into early touch with persons believed or suspected to be suffering from tuberculosis, and also for keeping in touch with them during their subsequent treatment. In fact, as observed elsewhere in this report, the contact with insured persons is now closer than with non-insured, since the Panel Doctor is expected to report *suspected* as well as actual tuberculosis, whereas the doctor in attendance upon a non-insured person need only notify when he has reason to believe that the patient is definitely suffering from the disease, and the knowledge of that fact may in many cases only be ascertained after repeated sputum examinations.

Financial Changes.

The introduction of the Act of 1930 made a very profound change in the basis of payment for treatment so far as Insured persons are concerned. Formerly, under the Agreement between the Belfast Corporation and the Belfast Insurance Committee (which ran from 1st February, 1916 to 30th September, 1930) the cost of treatment of insured persons was borne by the Sanatorium Benefit Fund, which was made up of the product of 1s. 3d. per annum for each insured person within the Belfast area. This amount varied, of course, as the number of insured persons in the area, but it generally ran to between £9,000 and £10,000 per annum. The figure to be paid under the new Act will be “ such amount as the Minister of Labour may certify to be the equivalent of a sum of 9d. per head of the average number of persons in the county or county borough entitled to Sanatorium Benefit in the three years 1926, 1927 and 1928.” This sum has now been fixed by the Ministry at £5,700 7s. 0d. per annum—a sum which past experience enables us to say will hardly meet the cost of treating insured persons in Sanatoria, even after making allowance for the saving which will be effected by the Ministry providing drugs and

domiciliary treatment for persons entitled to Medical Benefit. It is only fair to state that the deficit between income and expenditure in respect of the treatment of tuberculosis in the city is at present borne as to one moiety by the Exchequer of the Government of Northern Ireland, and as to the other moiety by the Belfast Corporation.

TREATMENT OF INSURED PERSONS.

Table 23.—Shows the numbers of insured and non-insured persons examined for the first time, or whose diagnosis was made definite, during the year 1930.

Year	Insured & Exempt		Total	Per cent. of Grand Total	Non-Insured		Total	Per cent. of Grand Total	Grand Total
	Male	Female			Male	Female			
1930	317	333	650	38%	496	580	1076	62%	1726

Table 24.—Shows the number of patients found on examination to be tuberculous or “suspect” requiring treatment, and the number found to be non-tuberculous.

Year	Tuberculous or Suspect				Total	Per cent. of Grand Total	Non. Tuberculous				Total	Per cent. Grand Total	Grand Total
	Insured		Non- Insured				Insured		Non- Insured				
	M.	F.	M.	F.			M.	F.	M.	F.			
1930	233	232	245	292	1002	58%	84	101	251	288	724	42%	1726

The grand total includes 114 “suspects” transferred in the year under review to the tuberculous or non-tuberculous class.

Table 25.—Shows the forms of tuberculosis from which new insured patients examined during the year were found to be suffering.

Year	Pulmonary		Glandular		Osseous		Abdominal		Other or General		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1930	186	177	8	8	5	6	3	5	3	3	404

Insured Patients on Treatment.

The number of Insured persons on Sanatorium Benefit treated throughout the year was 2,332. The number on Sanatorium Benefit at the end of the year, compared with previous years, is shown in the following table.

Table 26.—Shows the number of insured persons on Sanatorium Benefit at the end of the years indicated.

Year	1923	1924	1925	1926	1927	1928	1929	1930
Persons	1777	1732	1740	1664	1784	1817	1909	1806

TREATMENT OF EX-SERVICE MEMBERS.

The number of men who served in the war, examined for the first time during the year, was 36, as compared with 58 in the year 1929.

Table 27.—Shows the number of Discharged Service members on the various forms of treatment, at the dates mentioned.

Date	Institute	Domiciliary	Sanatorium.	Total
31st December, 1928	108	161	17	286
31st December, 1929	105	159	16	280
31st December, 1930	101	179	5	285

CLIMATIC CONDITIONS.

It is a matter for regret that the capital of Northern Ireland should still lack an official meteorological station, for although private observers give records of rainfall, air temperature, etc., no record is available of the hours of bright sunshine. In the absence of such a record it is impossible to say whether Belfast is better or worse off in this respect than other cities, but in an industrial city like ours the amount of sunshine which reaches the ground level must be seriously lessened by domestic and industrial smoke, thus retarding the normal growth of children, and impairing the health of the community.

I am indebted to Miss Firth, of Cavehill Road, for the following figures :—

Rainfall.

Table 28.—Shows the Rainfall in inches and the days on which rain fell during the year 1930, as compared with 1929.

Year	Rainfall in inches.	Days on which rain fell.
1929	42.37	237
1930	42.05	244

February with 0.94 ins of rain was the driest month of the year ; August with 6.54 was the wettest.

CHART 3

SHOWING THE INCIDENCE OF MORTALITY FROM PULMONARY TUBERCULOSIS ON
MALES AND FEMALES IN AGE-PERIODS OF FIVE YEARS, CALCULATED PER 1,000
MALES AND FEMALES LIVING IN EACH AGE-PERIOD, FOR THE YEAR ENDED 31st
DECEMBER, 1930.

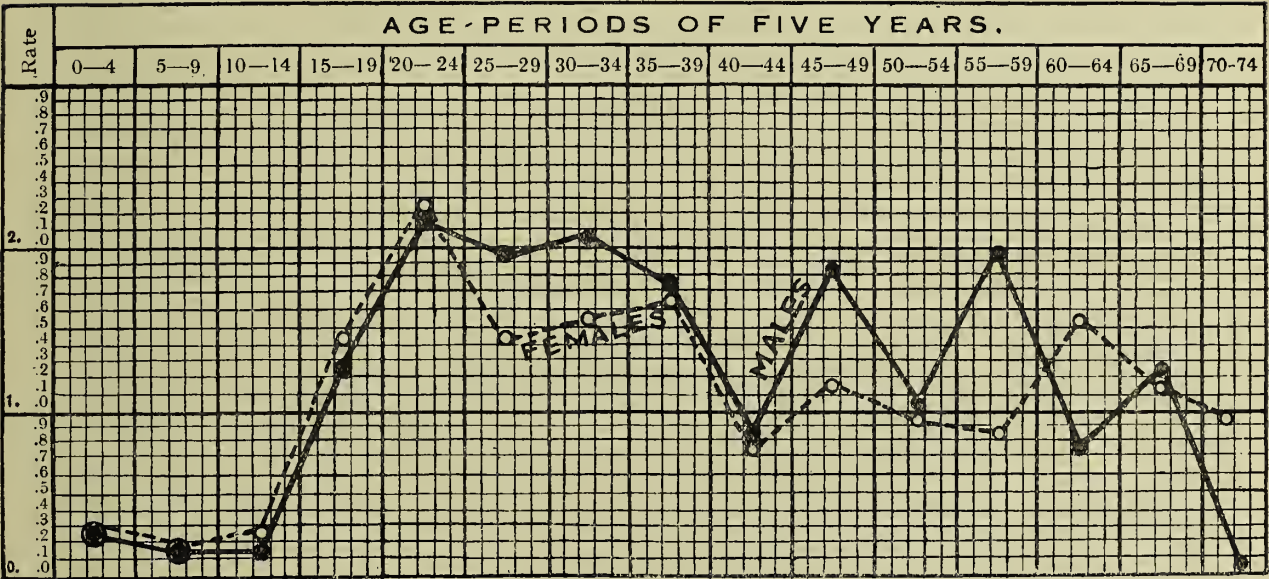
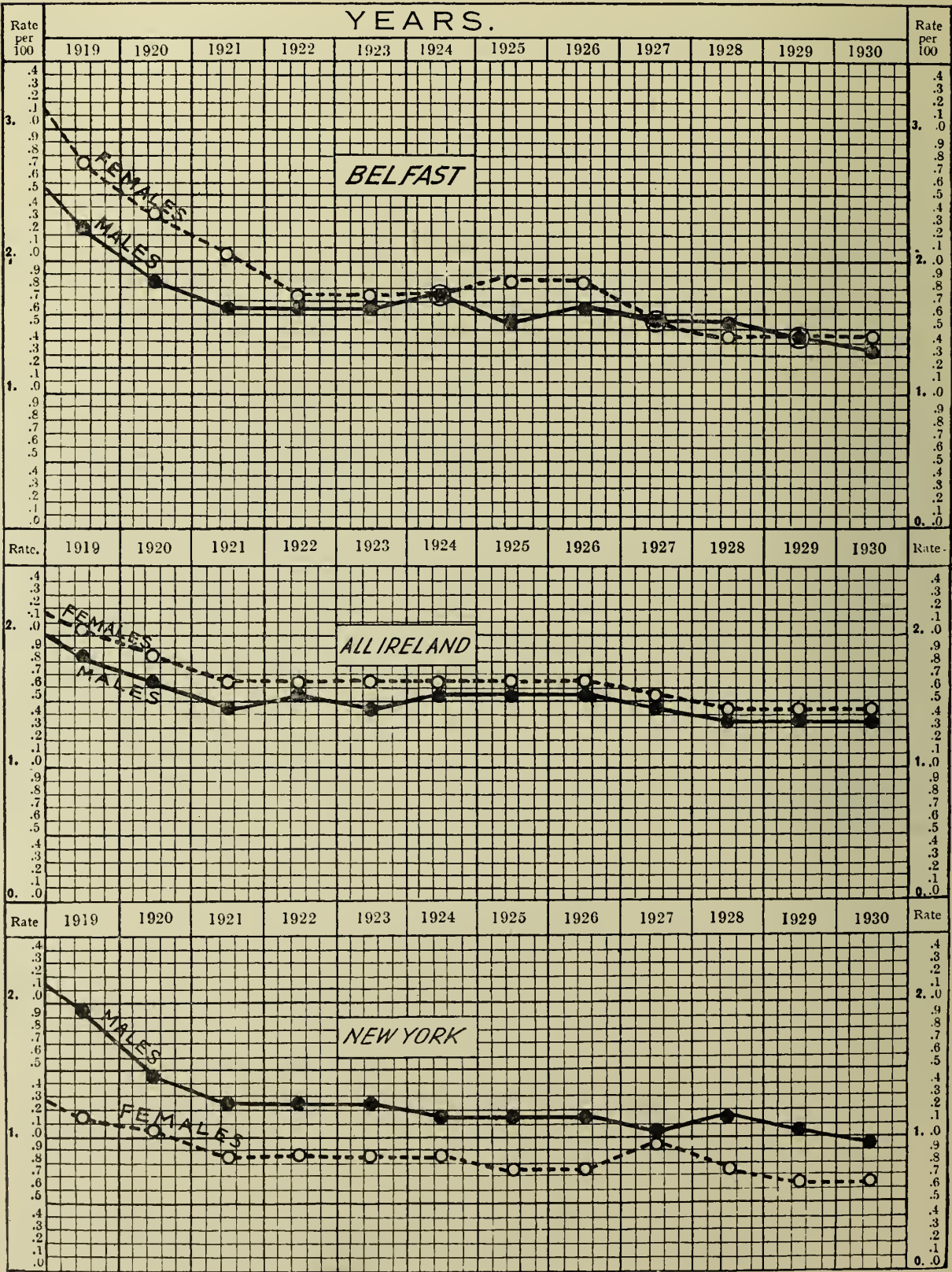


Chart 4 shows the comparative incidence of the mortality from all forms of tuberculosis amongst males and females in Belfast, Ireland, and New York. From this Chart it will be seen that in New York, as in Great Britain, the incidence of Tuberculosis falls more heavily on men than on women— whereas the incidence falls more heavily on women than on men in Belfast, and in Ireland generally.

CHART 4
SHOWS THE COMPARATIVE INCIDENCE OF THE MORTALITY FROM ALL FORMS
OF TUBERCULOSIS AMONGST MALES AND FEMALES IN BELFAST, IRELAND,
AND NEW YORK.



TUBERCULOSIS TOUR IN CANADA AND THE U.S.A.

Last autumn, through the generosity of the Sun Life Insurance Company of Canada, a group of tuberculosis officers and workers, of whom I was one, were afforded an opportunity of making a tour in Canada and the United States, to enable us to acquaint ourselves with American methods of the treatment of tuberculosis. The tour—one of the best organised I have ever known—under the personal supervision of Dr. Wodehouse, the energetic Secretary of the Canadian Tuberculosis Association, extended from the 15th August to 5th September, and included visits to hospitals, sanatoria and various tuberculosis associations at Quebec, Montreal, Ottawa, Toronto, Lake Muskoka, Winnipeg, Ninette, Chicago, Detroit, Hamilton, London (Ont.) and New York.

At each of these places we saw methods of diagnosis, prognosis and treatment which, though not new, were applied with an energy and perseverance characteristic of a people not hampered by tradition or dulled by routine. We found that organisation differed widely in Canada and the United States as compared with arrangements at home; thus, only in Chicago did we find a Municipal Authority which had a complete scheme, including dispensaries and sanatoria, for the treatment of tuberculosis. In almost all other centres, the local authority availed themselves of existing voluntary institutions and arrangements. This was possible on account of the large number of privately owned and endowed centres for treatment. The local authorities, however, fulfilled important functions in promoting and administering laws and regulations concerning hygiene, milk and food inspection, etc. Thus, in Toronto the local authority has no tuberculosis institutions of its own, but avails itself of existing privately endowed dispensaries and sanatoria; the Public Health Department has instituted regulations which make it compulsory that all milk for sale in the city must be pasteurised under municipal supervision. This regulation is not confined to Toronto alone, since pasteurisation of milk is practised in 32 Canadian cities, mostly with populations of over 20,000. In addition to pasteurisation, many cities have a milk supply which is also drawn from tuberculin tested herds. In the United States pasteurisation and the provision of pure milk is carried to even greater perfection, for in practically every large city, 90 per cent. or more of the milk is pasteurised, while in 21 cities the entire milk supply is required to be submitted to this process.

At Toronto we had an opportunity of seeing the practical effect of this universal pasteurisation and grading of milk for human consumption in stamping out bovine tuberculosis in a great city. Pasteurisation, or certification of milk, under Public Health Regulations has been in force in Toronto since 1915, and so successful have been the results of these public health measures that Dr. Parsons of the Toronto Children's Hospital informed us that he had not seen a case of tuberculosis in children for five years, in which the causative organism was the bovine form of the tubercle bacillus. The Medical Officer of Health went further, declaring that bovine tuberculosis "presented no problem in Toronto." These opinions from the clinical and public health standpoint have been corroborated from the bacteriological side by a young lady graduate of Toronto University, Dr. R. M. Price. In a splendid piece of laboratory research to ascertain what was the type of bacillus associated with the tuberculous lesions in 193 Toronto children (all under 14 years of age, and all, with one exception, suffering from non-pulmonary forms of tuberculosis), Dr. Price found that 86.5 per cent. were associated with the human form of the bacillus, and only 13.5 per cent. with the bovine form. Further, in the majority of the cases in which the human type of the bacillus was found, there was a history of contact with open pulmonary tuberculosis, while the children whose lesions were caused by the bovine type of the bacillus had all, without exception, come from outside districts where the use of pasteurised or certified milk had not been made compulsory.

Winnipeg was the most westerly point reached on the tour, and the visit of the party was timed to correspond with the week during which the British Medical Association held its Annual Meeting in that city. There we came in touch with another form of organisation and control of the treatment of tuberculosis, in that Dr. Stewart (Medical Superintendent of the Ninette Sanatorium, a few miles from Winnipeg) who is what corresponds to Chief Tuberculosis Officer for the Pro-

vince of Manitoba, makes arrangements for travelling clinics, staffed by his Assistants, to attend for a week at a time in various parts of the Province. These travelling clinics are exceptionally well equipped, even to the extent of having a portable X-ray apparatus, facilities for sputum examinations, etc. Following upon examination, arrangements are made for appropriate treatment either with the local Doctor or in Sanatoria, where special methods of treatment—such as artificial pneumothorax, thoracoplasty, phrenic avulsion, etc., are available.

In Detroit we saw some splendid surgical work for the treatment of pulmonary tuberculosis in the Herman-Keiffer Hospital, consisting of the removal of certain ribs so as to bring about collapse of the lung, and thus ensure effectual local rest for the treatment of the diseased lung.

As already mentioned, the tour officially ended on September 3rd, but through the kind invitation of Dr. W. C. White, Chairman of the Committee on Medical Research of the American National Tuberculosis Association, I visited the Government Hygienic Laboratory at Washington, to investigate the work which the Research Committee were doing in regard to tuberculosis. The scheme is a splendid illustration of organised team work, whereby, instead of relying upon isolated research by solitary workers, or isolated work in privately endowed centres, the laboratories of thirteen universities, as well as special institutions in Philadelphia, New York, etc., are contributing their share to a common scheme of research which, under a central committee, promises to be of outstanding value and importance.

At the H. K. Mulford Company's works in Philadelphia I was received with great courtesy by Drs. Reichel and Huntoon, and was shown the various processes for the growing of tubercle bacilli in unprecedented quantities for chemical analysis, in collaboration with the Research work mentioned.

Furnished with a letter of introduction from Dr. White, I spent a delightful day at the Rockefeller Institute, seeing the experimental work of Dr. Florence Sabin and her colleagues. The part which they have undertaken in the research was most interesting to me from the standpoint of clinical application. It is to ascertain the effect on the blood of the various fractions of the tubercle bacillus. The knowledge of this may lead to most important considerations in the diagnosis, prognosis, and treatment of tuberculosis.

From the Rockefeller Institute I went to see Dr. Morton Kahn at the Biological Laboratory of the Cornell University. Using Chambers' micro-manipulator, Kahn was able to demonstrate in microscopic hanging drops of Long's water-clear synthetic medium, the course of the life-history of a single tubercle bacillus. By this method he was able to show that our old conception of the manner of reproduction of the tubercle bacillus by the simple fission of one bacillus into two is an error. The process is much more complicated.

From the work of this research, so far as it has gone, I believe the following developments may be confidently expected: (1) The production of a new tuberculin with antigenic qualities, without toxic effects. (2) In the examination of sputum a realisation of the varying appearances of the tubercle bacillus, due to the different phases of its life cycle. (3) Better methods of diagnosis and prognosis, combined with a test for activity or passivity of the lesion, through observation of the blood cells and serum. (4) A more scientific knowledge of the biological, biochemical and physical causes which constitute the symptom complex of the disease, leading to (5) the elaboration of a method of treatment which may, even in our own lifetime, solve the age-long problem of tuberculosis.

THE VALUE OF A PURE MILK SUPPLY.

I cannot refrain from emphasising the value of a pure milk supply, as evidenced by the splendid results referred to in the foregoing account of my American tour. In a previous report, I estimated that about 50 per cent of the non-pulmonary forms of tuberculosis are due to milk containing tubercle bacilli of the bovine type, in larger or smaller quantities. I believe that the use of Grade A T.T. (tuberculin tested) milk is increasing in the city of Belfast; the only objection to its universal

use is a financial one. But if Grade A. tuberculin tested milk is too expensive in these days of economic depression, we should at least insist on a milk supply pasteurised under municipal supervision. If such a milk supply were in universal use, I have no doubt that in a few years our results would be as striking as are those of Toronto.

DEATHS AND DEATH RATES.

The number of deaths from pulmonary tuberculosis in 1930 was 426, as compared with 485 in 1929, and with 836 in 1914. The death rate in 1930 was 1.02 per 1,000, representing a decrease of over 51 per cent as compared with the rate in 1914.

(The criticism that the fall in the number of deaths from pulmonary tuberculosis may be due to a transfer of diagnosis to, say, bronchitis, or some other chest disease, is met by the fact that the death rate from non-tubercular chest diseases has also fallen by an even higher percentage (52.6) as compared with 1914.)

The number of deaths from non-pulmonary tuberculosis in 1930 was 149, as compared with 97 in 1929 and with 290 in 1914. The death rate from non-pulmonary tuberculosis in 1930 was 0.36 as compared with 0.72 in 1914.

SUMMARY.

1. During the year, 1,638 persons notified as suffering from signs of tuberculosis in various forms were examined, as compared with 1,805 in the previous year (vide Table 1.)

2. Of the 1,638 persons examined during the year 51 per cent. were found to be tuberculous, and 7 per cent. "suspect," while 42 per cent. were regarded as not suffering from tuberculosis.

3. The re-attendances of old patients at the Institutes for examination and treatment numbered 27,897 as compared with 32,449 in the year 1929. This, in addition to the 1,638 new patients examined, makes a total of 29,535 attendances and treatments during the year. 127 old patients were too ill to attend the Institutes and were re-examined in their own homes, and 38 were re-examined at the Belfast Infirmary, by the Staff of the Institutes. This, of course is exclusive of attendances on patients in their own homes by Panel Doctors and Domiciliary Doctors acting under the Scheme of the Corporation—estimated at about 60,000.

4. The numbers of patients on the various forms of treatment at the 31st December, were as follows:—

Institutes	..	..	1780
Panel and Domiciliary	..	..	2803
Sanatorium	..	..	209
Graymount Hospital	..	..	58
Graymount O.A. School	..	..	120
Total			4970

5. The number of Visits paid by the Visiting Nurses to patients in their own homes during the year was 32,934.

6. The total number of patients who received treatment during the year was 6,446.

7. **Table 29.**—Shows the **results of treatment** according to the reports received from Institute, Institutional and Domiciliary Doctors :—

Form of Treatment.	Reports received throughout the Year.	Condition as shown in Reports received during the last Quarter of the Year.				
	D.A.C.* or D.Q.	G.I.	Imp.	I.S.Q.	Worse	Total.
In Municipal San.	..	7	103	76	1	187
Discharged Municipal Sanatorium ..	20	..	252	112	14	398
In Graymount Hospital	14	19	17	7	..	57
Discharged Graymount Hospital ..	12	..	..	3†	..	15
At Graymount Open Air School ..	..	..	148	50	..	198
Domiciliary ..	34	63	811	1,020	112	2,040
Institutes ..	16	5	429	417	4	871
Total ..	96	94	1,760	1,685	131	3,766

*D.A.C.—Disease apparently cured.

D.Q.—Disease Quiescent.

G.I.—Greatly Improved.

Imp.—Improved.

I.S.Q.—In Statu quo.

†Two of these three patients were removed by parents against medical advice.

8. During the year 426 persons died of the pulmonary form of tuberculosis and 149 of the non-pulmonary forms, as compared with 485 and 97 respectively in the preceding year.

9. Of the 426 persons who died in Belfast from pulmonary tuberculosis during the year, 363 were patients under the care of this Department. Of these 421, 52 died within one month of their first examination by us ; 154 within six months ; 205, or over 48 per cent. within one year. It may be inferred from these figures that the stage at which patients are first notified is often too late to admit of effective treatment.

10. **Table 30.**—Shows the declining trend of the death rate from pulmonary tuberculosis in Belfast during the last 13 years :—

Year.	No. of Deaths.	Death rate per 100,000.	Comparison with 1918 as 100.
1918	1051	267	100
1919	853	212	81.16
1920	762	184	72.5
1921	677	161	64.4
1922	624	147	59.37
1923	571	133	54.33
1924	605	139	57.56
1925	575	131	54.7
1926	570	136	54.2
1927	515	124	49.0
1928	499	120	47.3
1929	485	116	46.14
1930	426	102	40.5

From this Table it will be seen that for every 100 persons who died of Pulmonary tuberculosis in Belfast in 1918, only 40.5 died of the disease in 1930—a reduction in the rate, of almost 60 per cent. in thirteen years.

SUGGESTIONS FOR FURTHER DEVELOPMENT OF THE WORK.

However intensive the campaign against tuberculosis, new developments are constantly suggesting themselves as time goes on. The following seem to me desirable, reasonable and practicable :—

1. A more intensive education of the people in matters of public and personal health, and in the prevention and cure of tuberculosis.
2. More open-air schools for delicate children and for children in danger of developing tuberculosis through living in unhealthy home surroundings.
3. The extension of accommodation for the treatment of children suffering from the non-pulmonary, and especially the osseous, forms of tuberculosis. (This matter is at present under the consideration of the Committee).
4. A determined effort to provide a public milk supply free from infective organisms. If we cannot have Grade A. T.T. milk, let us have the next best thing—Pasteurised milk. If this were provided under Municipal supervision, it would go far to reduce the toll of disease, crippling and death caused by the bovine form of the tubercle bacillus.
5. In view of the increasing attention being paid to newer and more delicate laboratory methods for the diagnosis and control of treatment of tuberculosis, much useful work might be done along these lines—or in the discovery and development of others—if the staff were adequately reinforced. It is not sufficient merely to diagnose tuberculosis, and to treat patients along general lines, by old time methods ; if our system is to be modern and effective, we must move forward with the times.
6. The addition to the Medical curriculum of a course in the history, prevention, diagnosis and methods of treatment of tuberculosis, and the means of dealing with it in the community. (Although this is a matter which lies outside the jurisdiction of the Committee, it is one of such general importance that I feel compelled to give expression to so urgent a necessity).

I am, Ladies and Gentlemen,

Your obedient servant,

Andrew Trimble

Chief Tuberculosis Officer.

MUNICIPAL SANATORIUM, WHITEABBEY.

REPORT

OF THE

Medical Superintendent.

MEMBERS OF THE TUBERCULOSIS COMMITTEE, 1930.

THE RIGHT HONOURABLE THE LORD MAYOR,
Councillor SIR WM. F. COATES, BART., D.L., J.P.

Alderman JULIA M'MORDIE, C.B.E., J.P. (retired).
Councillor H. M'KIBBIN (Deceased).
Councillor W. A. COCHRANE, J.P.
(Chairman).

Councillor CLARKE SCOTT
(Deputy Chairman).

Alderman W. H. ALEXANDER.

Alderman DR. J. D. WILLIAMSON, J.P.

Alderman CAPTAIN REID, J.P.

Councillor J. BOYLE.

Councillor W. F. CLOKEY (Deceased).

Councillor LT. COM. HARCOURT.

Councillor M. HOPKINS, J.P.

Councillor S. KYLE.

Councillor H. M'LAURIN, J.P.

Councillor W. P. NOBLE.

Councillor WM. SWEENEY.

Mr. K. M. ALEXANDER (F.I.A.A.)

Mr. WM. MOOREHEAD.

Mr. JAS. PARKHILL, J.P.

STAFF OF THE MUNICIPAL SANATORIUM.

Medical Superintendent	..	Percival S. Walker, M.D., B.CH., D.P.H.
Visiting Physician	..	John C. Rankin, M.D., B.CH.
Resident Medical Officer	..	Denis K. Watterson, M.D., B.CH., D.P.H.
House Physician	..	Audrey E. Lavelle, M.B., B.CH.
Visiting Dental Surgeon	..	Osborne Black, L.D.S.
Visiting Chaplains	..	Very Rev. J. O'Neil, P.P., V.F.
	..	Rev. W. B. M'Murray, B.A.
	..	Rev. Finlay Maguire, B.A.
Matron	..	Miss E. Woods, S.R.N.
Steward	..	Mr. Stewart Finlay.
Engineer	..	Mr. Samuel M'Clure.

REPORT OF THE MEDICAL SUPERINTENDENT

ON THE WORKING OF

THE BELFAST MUNICIPAL SANATORIUM,

For the Year ended 31st December, 1930.

TO THE MEDICAL SUPERINTENDENT OFFICER OF HEALTH.

SIR,

I have the honour to submit for your consideration my Seventh Annual Report on the working and progress of the City Sanatorium for the year ended 31st December, 1930.

In order to facilitate comparative reference and to preserve the formal continuity of these reports, I have made use of the usual sections and statistical tables. Many changes having occurred recently in the membership of the Tuberculosis Committee I have taken the liberty of repeating myself occasionally, where the occasion appeared to demand emphasis or reiteration.

Situation.—The Sanatorium is situated about five and a half miles north of the city centre on the southern slopes of the Belfast Hills, which shield it from cold winds. With the Lough below the patients receive both sea and mountain air.

Maintenance.—The Sanatorium is maintained on a basis of "State and Rated," one half of the maintenance being provided by the City Rates and one half by the Ministry of Home Affairs.

Capacity.—The number of beds provided is 285, distributed according to Table No. 1. The Sanatorium is equipped within certain limits for the reception and treatment of cases of pulmonary and surgical Tuberculosis at all ages.

The Type of Case.—Unfortunately the type of case coming under Sanatorium treatment shows a worsening as compared with that of previous years. The number of patients in advanced stages of the disease coming under "sanatorium" treatment appears to be on the increase, and not a few are admitted "in extremis." This finding applies to both pulmonary and surgical cases. In the latter instance, I have to emphasise again the fact that it is not fair that the Sanatorium should be utilised as a final resort for patients—children and adults—many of whom have already been under treatment in other general or municipal hospitals for periods up to five and six years.

Few indeed are the cases admitted without serious, and frequently dangerous complications. The Sanatorium was never intended for such a purpose; whilst quite suitable as a "Sanatorium," the institution is not equipped structurally or otherwise for the reception of advanced or dying cases.

Duration of Residence.—The average duration of residence for all patients was 152 days. From this it may be gathered that the patients must have been happy and comfortable to remain voluntarily for so long a period under restraint. As a matter of fact, the cheerful atmosphere which prevails throughout the sanatorium evokes the surprise of many visitors.

Accommodation.—The year 1930 has been remarkable in the fact that the close of it witnessed the closing down of an entire children's Pavilion (Pulmonary) on the one hand, and on the other hand, a comparative increase in the number of surgically affected children admitted to the hospital. At the close of the year only some 30 children suffering from pulmonary tuberculosis, and an approximately equal number suffering from surgical (i.e., bones, joints, etc.) forms of the

disease were in residence. It is now proposed by the addition of service annexes to equip No. 1 Children's Pavilion for the reception of surgically affected children. Nevertheless, it is inexplicable to me how, in a city of the size of Belfast, it is possible to have a children's department practically empty.

The erection of this annexe will result in the available accommodation at the Sanatorium comprising a new section of 40 beds for children suffering from tuberculous diseases of the surgical type. Already some 30 such cases are in residence. Simultaneously the removal of the latter cases from the hospital will free an equivalent amount of space for the reception and treatment of adult patients.

Throughout the year the acutely ill and the surgical sections have been consistently overcrowded, and it has at times been necessary to request the Central Department to recommend for admission only early and intermediate or convalescent patients, and to retain temporarily, cases of advanced disease in the city. Of course, the corollary here is the obvious fact that these cases of advanced disease were "early" or "intermediate" at previous dates.

REPAIRS AND IMPROVEMENTS.

Paths and Carriageways.—During the year another section of the "paths" were reconstructed in concrete. The main traffic avenues with the exception of the drive have been completed, and it is proposed to commence this year on the walks. The reconstruction in concrete is proving a most satisfactory expedient, and whilst the initial cost is not light, nevertheless, the freedom from repairs, and the additional cleanliness will eventually decrease the "repairs and improvements" account considerably.

Farm Garden.—This produce garden, which had been closed for two years, was re-opened early in 1930, and it is anticipated that a continuous supply of vegetables will now be available. The importance of fresh vegetables ("vitamin-carriers") in the treatment of deficiency disease can scarcely be over-estimated.

Painting.—The whole of the interior of the hospital and pavilions, and portion of the Nurses' Home was repainted during the period under review. This should not require any further attention, except washing, during the next four years.

Water Storage.—The storage tanks were cleaned out and refitted under the supervision of the City Surveyor.

It may be of some interest here to note the improvements which are contemplated for 1931. This programme is very extensive and far-reaching, and will augur in a new era for the institution. It includes the following:—

- (1) The erection of a service annexe to No. 1 Children's Pavilion, thus rendering this department available for the nursing of surgically affected children.
- (2) The installation of a modern X-ray Plant, and coincidently the fitting up and equipment of X-ray Theatre, dark room, etc.
- (3) The replacement of the present steam-cooking plant by gas apparatus.
- (4) The replacement of the present heating plant by slow combustion boilers and coincidently an increase of hot-water storage capacity.
- (5) The erection of a refrigerator annexe to the hospital kitchen.
- (6) The reconstruction of a further section of the paths and carriageways.
- (7) The reconstruction of the rear wall of the hospital building and pointing of brickwork generally.

(8) The replacement of the present (Diesel Engine and battery) system of Electric Lighting by obtaining the current and power required through the Belfast City Electrical Extension Scheme.

It will thus be readily seen that the ensuing year promises to be one of phenomenal progress in the history of the City Sanatorium.

STAFF COMPLEMENT.

General Staff—				Engineering Staff—			
Medical Superintendent	..	1		Engineer	..	..	1
Assistant Medical Officers	..	2		Assistant	..	..	1
Visiting Physician	..	1		Firemen	..	..	4
Visiting Dental Surgeon	..	1					
Visiting Chaplains	..	3		Outdoor Staff—			
Nursing Staff—				Gardener	..	..	1
Matron	..	..	1	Assistant Gardener	..	..	1
Sisters	..	..	5	Carpenter	..	..	1
Staff Nurses	..	..	5	Assistant to Carpenter	..	..	1
Probationers	..	..	20	Porters	..	..	3
				Labourers	..	..	4
Clerical Staff—				Domestic Staff—			
Steward	..	..	1	Sewing Mistress	..	..	1
Clerks	..	..	2	Cooks	..	..	2
				Maids, etc.	..	..	19
Open-Air Schools—							
Mistresses	..	..	2				

CLASSIFICATION OF PATIENTS SUFFERING FROM TUBERCULOSIS.

In this report the following system of classification of cases and of recording results has been used :—

Classification.

(1) Patients under 15 years of age are classed as children, and those of 15 years and upwards as adults.

(2) Patients are classified according to the organ or parts affected as follows :

(1) **Pulmonary Tuberculosis** (including tuberculosis of Pleura or In-trathoracic glands).

(2) **Non Pulmonary Tuberculosis.**

Patients suffering from both pulmonary and non-pulmonary tuberculosis are classified as Pulmonary cases.

(3) Patients suffering from pulmonary tuberculosis are divided into :—

(1) **Class T.B. Minus**, viz., cases in which Tubercle Bacilli have never been demonstrated in the sputum, pleural fluid, fæces, urine, etc.

(2) **Class T.B. Plus**, viz., cases in which the presence of Tubercle Bacilli has at any time been demonstrated.

Class T.B. Plus is further sub-divided into three groups, as follows :—

Group 1.—Cases with slight constitutional disturbance, if any, and in whom the obvious physical signs are of a very limited extent.

Group 2.—Cases which cannot be placed in Groups 1 and 3.

Group 3.—Cases with profound systemic disturbance or constitutional deterioration with marked impairment of function, and with little or no prospect of recovery.

(4) Patients suffering from non-pulmonary tuberculosis are classified according to the site of lesion, as follows :—

- (1) Tuberculosis of bones and joints, i.e., “osseous.”
- (2) Tuberculosis of peritoneum, intestines, or mesenteric glands, i.e., “abdominal.”
- (3) Tuberculosis of other organs.
- (4) Tuberculosis of peripheral glands.

Patients suffering from multiple surgical lesions are classified in one sub-group only, viz., in that applicable to the case which stands highest in the immediately preceding list.

RESULTS OF TREATMENT.

The following terms are used to describe the results of treatment :—

“**Quiescent.**”—Cases which have no symptoms of Tuberculosis, and no signs of Tuberculous disease, except such as are compatible with a completely healed lesion, and in whom the sputum, if any, is free from Tubercle Bacilli.

“**Improved.**”—Cases short of “quiescent,” in whom the general health is fair, and the symptoms of Tuberculosis have materially diminished.

“**No Material Improvement.**”—All other patients who are alive.

It will be noted that the terms “arrested,” or “recovered,” or “cured,” do not appear in these reports, and criticism has been at times made along these lines. The Sanatorium being a residential institution such terms are inapplicable, and the use of them would be misleading and erroneous. The official interpretation of such terms explains the position clearly :—

“**Arrested.**”—Cases in which the disease has been “**Quiescent**” for a period of two years.

“**Recovered or Cured.**”—Cases in which the disease has been “**Arrested**” for at least three years.

It will therefore be seen that such terms are entirely out of place in a report of an institution, where residence is necessarily measured in months, and not in years.

STATISTICS.

The following Tables cover the period extending from 1st January, 1930, to 31st December, 1930.

Table No. 1.—Average number of Beds available :—

		Pulmonary Tuberculosis.		Surgical Tuberculosis.	Total.
		Sanatorium Beds.	Hospital Beds.		
Adult Males	..	87	26	..	113
Adult Females	..	41	26	20	87
Children	..	66	..	19	85
Total	..	194	52	39	285

Table No. 2.—Annual Return showing the extent of treatment during year.

	In Institution 1/1/30.	Admitted during year.	Discharged during year.	Died.	In Institution 31/12/30.
Number of Patients.	222	476 (Including 15 re-admissions).	445 (Including 15 re-discharges).	44	209

Table No. 3.—Annual Return showing the Numbers of Persons admitted during year, classified according to the Type of Disease (excluding 15 cases re-admitted).

Type of Case.	Men.	Women.	Children.	Total.
Pulmonary Tuberculosis ..	199	120	66	385
Surgical Tuberculosis ..	14	11	48	73
Re-classified ..	2	1	..	3
Total ..	215	132	114	461

Table No. 4.—Annual Return showing the Numbers of persons discharged during the year, classified according to Type of Disease (excluding 15 cases re-discharged).

	Men.	Women.	Children.	Total.
Pulmonary Tuberculosis ..	173	108	88	369
Surgical Tuberculosis ..	17	8	33	58
Re-classified ..	2	1	..	3
Total ..	192	117	121	430

Average duration of residence per patient :

Patients discharged during 1930 ..	154.4 days
Patients died during 1930 ..	134.3 days
Total discharged or died during 1930 ..	152.6 days

NON-TUBERCULAR CASES ADMITTED.

Three cases were admitted and found to be suffering from the following complexes :—

- (1) Mitral Stenosis.
- (2) Asthmatic Myocarditis.
- (3) Dementia.

ADMISSIONS.

During the year 385 patients suffering from Pulmonary Tuberculosis were admitted to the Sanatorium. The type and grade of the disease as manifested in these patients are indicated in the following table :—

Table No. 5.

	CLASSIFICATION.	Men.	Women.	Children.	Total.
Pulmonary Tuberculosis.	Class T.B. Minus ..	71	55	63	189
	Class T.B. Plus—Group 1. ..	1	..	..	1
	Class T.B. Plus—Group 2. ..	12	10	..	22
	Class T.B. Plus—Group 3. ..	115	55	3	173
	Total	199	120	66	385

The following complications were noted upon admission or occurred during residence :—

Other Forms of Tuberculosis :—

a. Osseous	8	Meningitis	2
b. Larynx	17	Hernia	1
c. Glandular	7	Eye Conditions	6
d. Genito-urinary	4	Acute Abdomen	2
e. Cutaneous	3	Empyema	1
f. Abdominal	3	Varicose Veins	2
Spontaneous Pneumothorax	2	Renal Conditions	2
Hæmoptysis (severe)	31	Unhealthy Naso-pharyngeal Conditions	64
Syphilis	10	Asthma	1
Pleural effusion	4	Bronchitis	6
Myocardial Degeneration	1	Vesical Incontinence	3
Hysteria	2	Chorea	1
Cardic Lesions	7	Ischiorectal abscess	3
Old Poliomyelitis	1	Psychoneurosis	1
Ear Conditions	6	Diabetes	2
Gastro-duodenal Conditions	4	Parkinsonism	2
Skin Diseases	7	Osteo-arthritis	1
Hyperthyroidism	1	Mastitis	1
Epilepsy (Jacksonian)	3		

It will be readily seen from the above list the varied conditions which daily present themselves for treatment in addition to the complex of Tuberculosis.

DISCHARGES.

During the same period 369 pulmonary patients were discharged (excluding those cases "re-discharged" and "re-classified"), and 44 died. The results of treatment are indicated in the following Table (No. 6).

Table No. 6.

	DURATION OF RESIDENCE IN SANATORIUM.													
Condition upon Admission.	Condition upon Discharge.	Under 3 months M. F. Ch.			3—6 months M. F. Ch.			6—12 Months M. F. Ch.			Over 12 months M. F. Ch.			Total
Class T.B. Minus	Quiescent	1	2	—	—	1	3	3	2	1	—	—	—	13
	Improved	13	25	35	13	10	21	17	7	12	6	3	—	163
	N.M. Imp.	11	9	13	1	2	1	2	2	—	2	1	—	44
	Died	1	1	—	—	—	—	1	—	—	—	—	—	3
Class T.B. “ ÷ ” Plus Group 1	Quiescent	—	—	—	—	—	—	—	—	—	—	—	—	—
	Improved	—	—	—	—	—	—	—	—	—	—	—	—	—
	N. M. Imp.	—	1	—	—	—	—	—	—	—	—	—	—	1
	Died	—	—	—	—	—	—	—	—	—	—	—	—	—
Class T.B. “ ÷ ” Plus Group 2	Quiescent	—	—	—	—	—	—	—	—	—	—	—	—	—
	Improved	5	4	—	—	1	—	3	1	—	—	—	—	14
	N. M. Imp.	2	1	—	—	—	—	—	—	—	—	—	—	3
	Died	—	—	—	—	—	—	—	—	—	—	—	—	—
Class T. B. “ ÷ ” Plus Group 3	Quiescent	—	—	—	—	—	—	2	—	—	1	—	—	3
	Improved	14	4	—	17	3	1	7	2	—	3	1	—	52
	N. M. Imp.	26	21	1	14	4	—	8	1	—	2	—	—	77
	Died	18	4	—	6	4	—	4	3	—	1	1	—	41
	Total ..	91	72	49	51	25	26	47	18	13	15	6	—	413

"M." = Male ; "F." = Female ; "Ch." = Child.

The results of treatment of pulmonary cases may briefly be summarised as follows :—

Sixteen were discharged with no active sign of tuberculosis, 228 as improved, and 125 indicated no material improvement of the total 369 discharged; the sputum examination was negative in 182 cases including cases without sputum, and positive in 187 cases upon discharge. This latter figure indicates a large increase in infectious cases.

SURGICAL SECTION.

During the year 73 patients suffering from the various forms of the so-called "Surgical Tuberculosis" were received for treatment, of whom 48, or 66 per cent. were children. These cases present a brighter picture and outlook than those reviewed in the previous section, but nevertheless, it is my duty once again to emphasise the high proportion of "surgical" cases, which are brought under Sanatorium treatment when all else surgical has failed.

In the following Table these 73 patients are shown, scheduled according to the nature of the lesion.

Table No. 7.

	Bones and Joints.	Abdominal.	Glandular.	Other Organs.	Total.
Men ..	11	2	1	—	14
Women ..	8	2	1	—	11
Children ..	22	20	5	1	48
Total ..	41	24	7	1	73

From the above Table the increase in the admission rate of surgical cases (children) will be readily seen.

During the same period 58 patients suffering from the surgical forms of the disease were discharged. The immediate results of treatment are indicated in the following Table.

Table No. 8.—Annual Return showing the immediate results of treatment of 58 patients suffering from the surgical forms of Tuberculosis, discharged during the year.

	DURATION OF RESIDENCE IN THE SANATORIUM.													
Type of Disease upon Admission.	Condition upon Discharge.	Under 3 months			3—6 months			6—12 months			Over 12 months			Total.
		M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
Osseous	Quiescent	—	—	—	2	—	—	—	—	1	—	—	1	4
	Improved	2	1	1	—	1	2	1	—	1	1	1	3	14
	N. M. Imp.	1	—	1	—	—	1	2	—	—	2	—	—	7
	Died	—	—	—	—	—	—	—	—	—	—	—	—	—
Abdominal	Quiescent	—	—	2	2	—	1	—	—	—	—	—	3	8
	Improved	—	—	—	2	—	1	—	—	3	—	—	—	6
	N. M. Imp.	—	1	4	—	—	—	—	—	—	—	—	—	5
	Died	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Organs	Quiescent	—	—	—	—	—	—	—	—	—	—	—	—	—
	Improved	—	—	—	—	1	—	—	—	—	—	1	—	2
	N. M. Imp.	—	—	—	—	—	—	—	—	—	—	—	—	—
	Died	—	—	—	—	—	—	—	—	—	—	—	—	—
Glandular	Quiescent	—	—	—	—	—	—	1	—	—	—	—	—	1
	Improved	1	1	1	—	—	1	—	—	1	2	1	2	10
	N. M. Imp.	—	—	1	—	—	—	—	—	—	—	—	—	1
	Died.	—	—	—	—	—	—	—	—	—	—	—	—	—
Total ..		4	3	10	6	2	6	4	—	6	5	2	10	58

DEATHS.

Forty-four patients died in the institution during the past year.

A brief analysis of these deaths may be instructive and of interest, and I therefore append a few particulars : —

Sex.—Males 31 ; Females 13 ; Children, Nil.

Age Periods in Years :

5—10 years	..	..	0 deaths.
11—15 „	..	..	1 „
16—20 „	..	..	17 „
21—25 „	..	..	4 „
26—30 „	..	..	4 „
31—35 „	..	..	9 „
36—40 „	..	..	3 „
41—45 „	..	..	2 „
46—50 „	..	..	2 „
51—55 „	..	..	0 „
56—60 „	..	..	2 „

Family History :—In 21 instances enquiry elicited the information that there was a history of Tuberculosis affecting a member or members of the deceased's family.

Residence in Sanatorium prior to Death :

Less than 1 week in residence	..	..	..	3 deaths.
Less than 1 month in residence (excluding above)	..	..	..	5 „
Less than 3 months in residence (excluding above)	..	..	..	16 „
Less than 6 months in residence (excluding above)	..	..	..	10 „
Less than 1 year in residence (excluding above)	..	..	..	8 „
Over 1 year in residence	..	..	..	2 „

Features which may be specially noted are :—

- (1) That over 70 per cent. of deaths occurred in male patients.
- (2) That the age period 16—20 years is ominous in that practically 40 per cent. of the total deaths occurred during this quinquennium.
- (3) That in over 50 per cent. of cases the family history was “ negative.”
- (4) That in over 77 per cent. of cases death occurred within six months of entering the Sanatorium for treatment, which, obviously in the majority of such cases was confined to nursing measures simply.

TREATMENT.

Nothing of moment has occurred to change the routine of treatment. The greatest emphasis is placed on securing absolute rest when activity in the lesion is evinced by any departure of the body temperature from the normal, and in the majority of cases exhibiting pyrexia on admission, a normally ranging temperature has been secured by rest in bed. In such a vitality reducing disease as pulmonary phthisis abundance of rest is essential. Just as a broken limb must be put at rest, and is by nature, compulsorily kept at rest, so must a diseased or broken lung be given all possible rest.

Cases with normal temperatures rest in the recumbent position for several periods (“ rest hours ”) daily, and thereby the resisting powers of the body as a whole are recruited. Further, patients are urged to avoid any physical or mental exertion, which may accelerate the rate of metabolism and thereby throw additional

stress and strain on the organs already weakened by disease. In this way local rest to the lung is obtained apart from operative measures, such as artificial pneumothorax, splinting, etc., which are utilised in suitable cases to secure physical immobilisation. By these means, and fresh air, and a full generous diet the needs of the victim to Tuberculosis are best served. Graduated exercise is undertaken by suitable cases, such exercise being carefully graded according to the individual capacity and tolerance, being prescribed daily by the medical officers.

With regard to FRESH AIR, it is a matter of no small interest to those engaged upon anti-tuberculous schemes in Belfast to recollect that the pioneer of the outdoor treatment was a Belfast practitioner, Dr. Henry McCormac. He held the Chair of Medicine in the Queen's College in this city, being elected thereto in 1836. He wrote in 1855 :—

“ For a long period of years I have with increasing fulness of connection discerned the undeniable effects flowing from an ill renewed atmosphere. I am perhaps the only practitioner of my time and standing, being the only one who is intimately and entirely convinced that consumption is not only, when taken early, very often removable, but what is of still greater importance, it is in every case preventable.”

He was often summoned by the Police Authorities for the breaking of windows in houses where he visited the sick, if he found the windows would not open. His death took place in 1886.

With similar aims outdoor institutions were established in every civilised country for the reception and treatment of persons suffering from tuberculosis, and in 1907 the present City Sanatorium was opened by the then Vice Reine under the control of the City Board of Guardians, and to-day stands as a monument to the foresight and progress of that august body, who hold the high honour of being pioneers of the fight against tuberculosis in our midst.

Chemotherapy.—Chemotherapy may be defined as the specific treatment of infections by artificial remedies. The object of those who study it is to find new remedies, which will cure or arrest diseases due to infections, not by alleviating the symptoms or invigorating the patient, but by directly and specifically suppressing the infection. Chemotherapeutic investigations have proved practically fruitful and include certain notable triumphs, such as the conquest of syphilis, dysentery, and malaria. I venture to express the opinion that in chemotherapy lies the means of making the eventual conquest of tuberculosis a hopeful possibility. Such research work as is possible in the Sanatorium is, therefore, being conducted along these lines, and the value of certain substances and drugs is investigated and appraised.

Amongst the front rank of chemotherapeutic agencies comes Sanocrysin—the double salt of gold elaborated by Mollgaard. This preparation has been utilised in the Sanatorium since 1925 and already 74 patients have been treated thereby. The dosage has been considerably modified by experience since 1925, and it is now possible to avoid the alarming reactionary sequelæ, which at the beginning attended its administration. Nevertheless, it appears to me that the value of the drug has been lessened by the attempts to avoid these reactions, as the earlier cases certainly have indicated more permanent and satisfactory results. On the other hand, it requires very considerable courage to recommend the administration of a drug in such doses as were previously used, and it has apparently become the universal practice to reduce considerably the amounts administered.

During the latter half of 1929, trial was made of a new salt of gold—Solganol—which was advertised by the sponsors as being equally valuable therapeutically as Sanocrysin, but free from the dangerous reactions and sequelæ attending the latter. This preparation has been utilised in the Sanatorium, and ten cases have been treated accordingly. As in Sanocrysin an immediate benefit was obtained, but it is too early yet to prognose as to its permanent value. Certainly, it is free from any reactionary sequelæ.

To return to Sanocrysin, 65 cases are tabulated who had received this form of treatment prior to 1930. This Table indicates the immediate and ultimate results of this mode of therapy as practised over a very varied type of case. I should here acknowledge my indebtedness to the Chief Tuberculosis Officer for his kindness in obtaining for me the ultimate history of the cases after discharge.

Total number of cases treated prior to 1930, 65.

After Treatment.			Immediate Result.	Ultimate Result.
Quiescent	..	..	13	13
Greatly Improved	..	..	15	2
Improved	..	..	19	10
N. M. Improvement	..	..	18	25
Died since	..	..	—	15

It will be noted that the immediate results fell away after discharge, and it appears that the temporary nature of the improvement is more obvious in those cases who were treated by the reduced dosage scheme. I may reiterate that in my opinion the "reaction" is not without value as regards the permanency of the result attained.

During 1930 a further 9 cases received Sanocrysin, the immediate results being—Quiescent 3; Improved 5; No Material Change 1.

ARTIFICIAL PNEUMOTHORAX.

Artificial pneumothorax is employed in cases of unilateral disease when there has been a lack of response to the usual sanatorium measures. Unfortunately such cases are limited as the great majority of patients coming into the Sanatorium during the year exhibited considerable disease in both lungs. Pending arrangements being made at the Central Tuberculosis Dispensaries, patients after discharge have attended at the Sanatorium for the periodical refills. As new cases come forward the number of extern patients in attendance will continue to increase. It may be that in the course of time it will be beyond our ability to treat them after discharge, which is really no part of Sanatorium duties proper.

It is greatly to be regretted that more suitable cases are not forthcoming for this valuable mode of therapy. Under this regime suitable patients are able after a short period of residence to follow their normal vocation and environment, and attend at the Sanatorium for "refill" about once in every three weeks, and consequently, practically a much decreased loss in the wage-earning capacity is occasioned.

During the year 1930, the following operations under this heading were performed :—

Number of inductions (new cases)	..	..	4
Number of " Refills " (old and new cases)	..	..	74
*Number of Gas Replacements	..	..	1

*(Gas Replacement is performed when fluid develops in the pleural sac with or without a coincident artificial pneumothorax, the fluid being removed and simultaneously replaced by air).

ARTIFICIAL LIGHT THERAPY

It is noteworthy that patients of themselves not infrequently ask for and are anxious to avail themselves of the facilities offered in this direction. The cases chosen are almost entirely those suffering from non-pulmonary (surgical) tuberculosis and comprise lesions of the joints, of the spinal column, of the bones, of the abdomen, of the glands, of the skin and complications, such as abscess and sinus formation. Undernourished and marasmic children also derive great benefit from treatment from artificial light sources.

In the Sanatorium the light equipment at present consists of six Radiant Heat Lamps and one Quartz Mercury Vapour Lamp. It is further proposed to equip the pavilion, which is shortly to be converted into an additional surgical section, with radiant heat and Carbon Arc apparatus.

The results of treatment by this means have been very satisfactory, particularly in three groups of cases, namely, (1) lupus ; (2) abscess and sinus formation ; and (3) abdominal disease. There is also no doubt that in many cases, joints which otherwise would have remained immobile, recover a useful range of movement after a course of sun, or artificial sunlight treatment.

Unfortunately in this Northern climate effective sunshine is only available sporadically during 3-4 months, and in consequence recourse is necessarily made to the artificial sources for application to those cases specially requiring it.

The following is a brief synopsis of the year's work in this direction :—

(1)	Total number of patients receiving " Sun Treatment "	..	91
(2)	Total number of patients receiving " Artificial Sunlight " Therapy		65
(3)	Total number of patients receiving Ultra Violet Radiation		56
(4)	Number of hours Sunlamps in operations	..	966
(5)	Number of hours Mercury Vapour Lamp in operation	..	131

X-RAY DEPARTMENT.

The use of X-rays in the diagnosis and treatment of tuberculosis is undoubtedly of great assistance, and the more experienced one is in their use the more is one able to appreciate their value. This quotation applies with equal force to both pulmonary and surgical tuberculosis. X-rays assist the physician to assess clearly and beyond quibble the actual condition in the lungs or bones. An additional record of the condition of the patient is thus available, and is interpreted in conjunction with clinical and bacteriological findings. In the absence of post-mortem examination, radiographic examination provides an encouraging and valuable stimulus to the clinician for the maintenance of clinical skill and judgment at a high level. The systematic use of X-rays, which has been made in this Sanatorium for several years past, has provided an additional avenue towards accurate diagnosis. In surgical cases careful X-ray photographs are often the best guides as to the extent of the lesion and to the amount of correction of the subsequent deformity, which may be attempted.

Further, Skiagrams are invaluable in the assessment of the progress of patients undergoing especial lines of treatment, and the labour and expense involved has been amply justified by the advantages derived therefrom.

Our X-ray apparatus, which has rendered since 1921 excellent yeoman service, is now worn out and obsolete, and is to be replaced during 1931 by an up-to-date modern apparatus capable of " stereoscopic work " and of " screening." The installation of the new plant awaits the installation of the City Electrical Supply in the Sanatorium, and I trust that both may be accomplished facts before the summer.

During the year 1931, the following work was carried out in this department :

Number of Skiagrams in cases of Pulmonary disease	..	169
Number of Skiagrams in Artificial Pneumothorax cases	..	80
Number of Skiagrams in cases of Surgical disease	..	83
Total number of Skiagrams taken	..	332

DENTAL DEPARTMENT.

The arrangements under this heading continue to give highly satisfactory results. The services of a part-time dental surgeon have now been available at

the Sanatorium since 1925, and, I, personally, can testify to the very excellent benefit to the patients that this appointment has made possible.

The necessity for such a department is obvious, and it is doubly so when treating tuberculosis. The tuberculous victim fights his battles via his stomach the efficiency of which organ in turn is dependent upon a healthy masticatory apparatus. Further, experience has shewn that the dangers and severe reactionary sequelæ which formerly attended the administration of certain chemotherapeutic compounds (e.g., gold preparations, etc.), may be considerably minimised if a preparatory overhaul of the mouth and accessory sinuses, etc., is carried out.

As regards the children the value of oral hygiene is even more important. It is regrettable that so many children are found to have septic and stinking oral cavities. The work here is as conservative as possible. An only slightly less important point, especially in children, is the value of the educational factor.

The following is a resume of the operations performed in the department during the past year.

Patients	..	..	..	278
Fillings	..	..	..	100
Dressings	..	..	..	249
Scalings	..	..	..	7
Extractions		..	..	119
Total Operations	..		..	475

OPEN AIR SCHOOL.

The first attempt at an open-air school in Ireland was made at the Belfast Municipal Sanatorium. It is, therefore, to be regretted that the endeavour to carry the plan to full fruition after having been sanctioned and approved by the various ministerial authorities has of necessity been deferred by reason of financial stringency.

As a result of the increasing number of children suffering from "surgical tuberculosis" being admitted, it has been found necessary to open a second school in the hospital, where such cases are at present retained for treatment. This school was opened in the early part of last year, and the daily attendance has averaged about 20. In consequence, in the Sanatorium there are now two separate day schools in operation—one in the children's pavilion for physically fit children, and one in the hospital for surgical and bedfast children.

There are many and great difficulties in carrying on schools in the conditions that pertain to sanatoria. The education of tuberculous children is not infrequently neglected prior to admission. Surely the fact that children are fully catered for when in residence should be a factor encouraging earlier admission and longer treatment and yet it does not appear materially to influence parents.

The schools are inspected by the Ministry of Education Inspectors. The average attendance during this year was 60.6 pupils, and I append hereunder a Table indicating relevant data :—

TABLE INDICATING AVERAGE NUMBER OF PUPILS ON ROLL AND AVERAGE DAILY ATTENDANCE.

	All Pupils.	Within Compulsory Age Limit.	Average Daily Attendance.		
			Under School Age.	Within Compulsory Age Limit.	Over School Age.
Boys ..	33	27	1.3	25.85	4.5
Girls ..	27.6	23.9	1	22.8	2.28
Total ..	60.6	50.9	2.3	48.65	6.78

The percentage of the number in average daily attendance (all pupils) to the average number on the rolls (all pupils) for the year was 95 per cent.

RECREATION.

No effort has been spared to prevent stagnation. A recreation committee composed of patients is elected periodically. The members are elected by vote. They are responsible for the supervision of the various forms of recreation, wireless, billiards, croquet, whist drives and the like. They are also responsible in a certain degree for the maintenance of good discipline in the wards generally. This element of responsibility and joint control has an excellent and steadying influence on the life of the institution.

Various entertainments have, in addition, been arranged and given throughout the year by various friends, to whom we are greatly indebted for their practical interest and kindness.

Here I should like to reiterate a plea for more amenities of a recreative nature for the nursing staff, e.g., tennis court, etc.

DISCIPLINE.

Discipline in the Sanatorium has vastly improved and is now very satisfactory indeed. A systematic scheme of punishments is in operation. Each patient knows exactly the penalty he or she incurs for the infringement of those regulations, which are most likely to occur. The automatic operation of such a scheme effects *per se* the observance of the regulations, and in this way an atmosphere of oppression is avoided.

RELIGIOUS MINISTRATIONS.

Religious services are conducted by the chaplains—representative of the three denominations. These officers also visit the patients and work in close harmony with one another.

LAUNDRY WORK.

The necessary laundry work is carried out by arrangement with the Belfast Board of Guardians, to whom thanks are due for the highly efficient and very economical service they afford the Sanatorium in this vital aspect.

CONCLUSION.

At the outset it may be stated that the Sanatorium is but the embodiment of those factors, which are calculated to elicit and increase the individual defences of the patient. The treatment, then, of a very large proportion of the adult cases, which I have analysed under the heading of admissions is simply carrying out a formality with the realisation of probable failure behind it. The Sanatorium was never intended for such a purpose as an "acute hospital," and the Belfast Sanatorium is by no means adapted for it. The problem, therefore, is whether the institution is to be a Sanatorium or a Hospital. It is quite satisfactory as a Sanatorium ; as a hospital for advanced cases, it is quite unsuitable.

It is a matter for regret that so very large a proportion of the patients, young and old, admitted during the past year, were found on examination to be in an advanced stage of the disease. In the treatment of all forms of Tuberculosis time is a factor of the greatest importance, for it is in the early stages that open-air treatment under expert medical supervision and attention yields a goodly harvest. Nevertheless, the number of advanced cases form the larger portion of the patients admitted. In a very large proportion of the surgical cases, as already stated, the disease was in an advanced stage, even in the case of children of tender years. This is unfortunate, not only from the point of view of the individual primarily concerned, but also from that of the general public health ; patients in an advanced stage of the disease frequently occupy beds for a lengthened period of time, which very materially limits the number of individuals it is possible to treat in residence.

Consequently, if the present system of dealing with tuberculosis is to have beneficial results, it is imperative that treatment be commenced at the earliest possible date.

After-care would appear to be a very weak link in the chain, which endeavours to draw the phthisical victim back to health. The question of a Municipal Workshop, where cases can work in accordance with their limitations, has been receiving my closest attention. A tentative suggestion is that with the anticipated improvement in economics and trade, some firm in our city might establish a workshop or factory, where tuberculous workers might find employment, if protected and supervised.

As in previous years, the immediate results of treatment seem to be satisfactory, despite the fact that we appear to be ignoring Tuberculosis, which is curable, and trying to cure consumption, which is a vastly different problem. 29 cases were discharged having their disease apparently cured, and 259 as improved, of whom a fair proportion ought to be—under normal economic conditions—self-supporting. To speak of cures at the end of a few weeks' or even months' treatment in a sanatorium is both paradoxical and illogical. I prefer to speak of the condition on discharge as the immediate result of treatment. Time alone, under outside conditions, will show how many of our quiescent and improved patients are actually and eventually "cures."

One reads and hears much of what the Sanatorium is doing and what it is not doing, and what it ought to be doing, and what it ought not to be doing! As a matter of fact, the Sanatorium is a much abused weapon—abused in every sense of the term—in the campaign against Tuberculosis. The very name, as Webb states "presupposes the curability of the patient it is intended to receive." Let me further define it as an institution embodying those principles that make for health—suitable treatment of diseased conditions, fresh air, nourishing food, etc., and including a school of hygiene and discipline. I can point with justifiable satisfaction to the fact that most patients admitted, though many in the advanced stage of Tuberculosis, benefit markedly from residential treatment for a reasonable time. The gain in weight is often phenomenal and working capacity is very considerably augmented. It must be admitted that the Sanatorium *per se* is satisfactory, and this, too, in climatic conditions considered by some to be entirely unsuitable. In this respect I am convinced by observation and from statistics of other city sanatoria, and comparison with those of various health resorts that Tuberculosis patients should be treated in the climatic conditions that pertain where they are permanently resident. This is not in itself a claim that a patient will do equally well in Belfast as in Montana, Davos, or Geneva, but if necessity compels his return to Belfast to follow his previous occupation, his ultimate history will not supersede that of the patient treated in his own environment. Too much is made of climate.

It is once again my very pleasant duty to acknowledge here the very loyal assistance rendered by the staff of the Institution. To my medical colleagues and the Matron I tender my deep appreciation of their support and co-operation. The clerical staff have given me generous assistance and a debt of acknowledgment is due to the Steward-clerk for relieving me of much supervisory duty, and for the very excellent manner in which the accountancy and secretarial sections are administered.

Finally, I desire sincerely and gratefully to acknowledge the very large measure of support accorded me by the Chairman and Members of the Tuberculosis Committee, and by the Medical Superintendent Officer of Health, all of whom take the keenest interest in the Institution, and are at all times ready to welcome suggestions for the improvement and betterment of conditions pertaining to patients and staff. Without their ready encouragement the administrative pathway of the Sanatorium would indeed be much more difficult.

I am,

Your obedient Servant,

P. S. WALKER,

Medical Superintendent.

MUNICIPAL HOSPITAL FOR TUBERCULOUS CHILDREN,
BELFAST.

Report of the Visiting Surgeon.

To the Chairman and Members of the Tuberculosis Committee, Belfast, on the Clinical work of the Municipal Hospital for Tuberculous Children, Graymount, for the year ended 31st December, 1930.

MR. CHAIRMAN, LADIES AND GENTLEMEN,

I beg to submit my report on the surgical work at Graymount for the year 1930, and to express my thanks for the ready support I have always received from you.

I have the honour to be,

Your obedient servant,

H. P. MALCOLM.

20th May, 1931.

ADMISSIONS DURING 1930.

Sixteen new patients were admitted during the year, and there were two re-admissions after temporary transfer to other hospitals.

Fifty-six patients remained in hospital on the 1st January, 1930, making a total of seventy-two undergoing treatment during the year.

Spinal Caries	..	..	..	5
Tuberculous Hip Joint Disease	..	..	..	3
Tuberculous Disease of Knee	..	..	..	4
Multiple Tuberculosis :—				
Spine and Hip	..	..	..	2
Hands, Feet, Face	..	..	..	1
Osteitis Tibia	..	..	..	1
				—
				16
				—

DISCHARGES.

There were seventeen discharges during 1930. These included two temporary transfers to other hospitals. The number of patients permanently discharged was therefore fifteen, of these, two were removed by the parents contrary to medical advice, one died, and twelve were discharged with disease arrested.

Fifty-seven patients remained in hospital on the 1st January, 1931.

Spine.

Disease arrested	6
Died	1

Hip Joint.

Disease arrested	2
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Knee Joint.

Disease arrested by amputation	..	1
Removed by parents	..	1

Ankle.

Removed by parents	..	1
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Multiple.

Spine and Hands, disease arrested	..	1
Hip and Rib, disease arrested	..	1
Hand Bones, disease arrested	..	1

—
15
—

Particulars of patients discharged during 1930 are shown in the following Tables.

SPINAL CARIES.

Reg. No.	Age on Admission.	Sex.	No. of Days Treated	Condition on Admission.	Cause of Discharge.	Deformity on Discharge.
256	2 yrs. 7 mths.	M.	20	Spinal Caries. Asthma	Died.	—
197	12 yrs.	F.	1132	Severe thoracic deformity. Sinus.	Disease arrested.	Deformity moderate, Sinus healed.
190	9 yrs.	M.	1158	Early lumbar kyphos.	Disease arrested.	Slight, unnoticeable.
176	3 yrs.	M.	1419	Early lumbar kyphos.	Disease arrested.	None.
173 & 160	2 yrs. 6 mths.	M.	1518	Severe thoracic kyphosis.	Disease arrested.	Small, will not disable.
153	8 yrs.	M.	1646	Early lumbar kyphos.	Disease arrested.	Slight, unnoticeable.
246 & 147	5 yrs.	F.	1464 268	Early lumbar, kyphos.	Disease arrested.	Slight, causing no disability (also renal calculus removed).

HIP-JOINT DISEASE.

Reg. No.	Age on Admission.	Sex.	No. of Days.	Condition on Admission.	Cause of Discharge	Deformity on Discharge.	Joint Movement on Discharge.
181	14 yrs.	M.	1115	Marked pain and spasm.	Disease arrested.	Hip ankylosed in optimum position with 1" shortening.	Ankloyed. Is now in good health, but fractured sound hip after cure and has stiffness on sound side with much disablement.
125	9 yrs.	M.	1947	65° flexion at hip, 25° adduction at hip, 40° flexion at knee.	Disease arrested.	Hip ankylosed in optimum position with 1" shortening. No deformity of knee.	Ankylosed. Also suffers from adolescent scoliosis.

KNEE JOINT.

Reg. No.	Age on Admission.	Sex.	No. of Days Treated.	Condition on Admission.	Cause of Discharge.
242	5 years, 9 months.	F.	7	White swelling knee. 30. flexion.	Removed by parents.
206	13 years.	M.	881	Much swelling, ulceration with secondary infection and early amyloid disease. Ulceration of heel.	Became gradually worse. Limb amputated. Discharged in excellent condition.

ANKLE JOINT.

Reg. No.	Age on Admission.	Sex.	No. of Days Treated.	Condition on Admission.	Cause of Discharge.
237	9 years, 11 months.	M.	254	Massive doughy swelling. Sinus.	Removed by parents. (Disease quiescent and ankle mobile).

MULTIPLE LESIONS.

Reg. No.	Age on Admission.	Sex.	No. of Days Treated	Condition on Admission.	Cause of Discharge.	Condition on Discharge.
236	1 year 9 mths.	M.	374	Caries 4th right Metacarpal and finger with sinus. Caries 5th left Metacarpal.	Disease arrested.	Healed. General condition excellent.
170	6 yrs.	M.	1379	1. Lumbar caries with early kyphos. 2. Suppurating cervical glands. 3. Positive Wasserman.	Disease arrested.	Good, Deformity slight and causing no disability. Glandular abscesses healed. No active sign of congenital disease.
163	12 yrs.	M.	1428	1. Abscess right 6th rib. 2. Abscess right hip joint with 15° adduction and 15° flexion	Disease arrested.	Abscesses healed, 20° of mobility in hip. $\frac{3}{4}$ " shortening.

OPERATIONS.

Nephrotomy for removal of renal calculus	..	1
Appendicectomy	.. ..	1
Aspirations of Abscesses	.. ..	9

INFECTIOUS DISEASES.

The following cases of infectious disease occurred—

Whooping Cough	.. ..	1
Ringworm	.. ..	1

DENTAL.

The following work was carried out by the Visiting Dental Surgeon—

Treatments	276
Fillings	165
Dressings	281
Extractions	25

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